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The Supervisorship

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SUPERVISORSHIPS have been established in many comparatively small towns, and in nearly all cities, for four distinctly different reasons: I. Because supervision has been recognized as an extremely valuable help in the establishment of good schools. This is a general reason.

II. Because in the cases of the installation of new subjects in the course of study, it has often been found that many old teachers were unfamiliar with them. In these cases the supervisors have been employed as specialists either to teach the children, directly, or to teach the class teachers how to teach the children. All the subjects of the so-called "new education" have been introduced only by means of experts in them: that is, artists, musicians, woodworkers, physical trainers, etc. In actual practice in all communities the supervisors or assistant supervisors teach both the children and the teachers, often at the same time, by means of illustrative lessons. Supervision involves illustration as well as criticism by blame and praise.

III. Because in actual fact the superintendent is often unable to give that detailed supervision which the schools actually need. His administrative duties grow with the growth of the community; and as they grow the time available for supervision decreases.

IV. Because in a large school system there can be no

uniformity without comparison of schools. This can be made constantly only when the supervisory force is adequate.

V. Because the average grade of work in certain lines has fallen so low as to require special attention. In consequence, various supervisorships have been added, all of them being in the nature of outgrowths of the superintendency, its branches as it were. All supervisorships represent the central office and all supervisors are the direct agents of the superintendent. The fact that many supervisors know more about their subject does not in the least affect the relationship. Reason I. has supported the creation of every kind of supervisorship. Reason II. has led to the creation of supervisorships in art, manual training, music, physical training, kindergarten, domestic science and art, nature-study, reading by phonic methods, German, French, Spanish, medical inspection of health. Reason III. has led to the creation of associate and assistant supervisorships. Reason IV. has led to the creation of grammar grade, primary grade, and kindergarten supervisorships and to various forms of inspectorship. Reason V. has led to the creation of supervisorships in any and all of the standard school studies and exercises, penmanship and reading supervisorships being very common.

Many supervisorships indicate not that most of the teachers do their work poorly, but that the educational standard of the community is high, and that the course of study is broad. The superintendent who advocates supervisorships does not create the impression that he himself is inexpert and idle, but that he means to have good schools and feels competent to manage specialists. Since most boards of education contain members who are willing to magnify the importance of their office, it is seldom as difficult to secure the new supervisorships as it is to raise the salaries and the general quality of old supervisorships. The drift in American education to-day is fast becoming a current that bears many supervisorships into the school systems. For the protection of the school children, educators in office must see that adequate standards and salaries are provided and adequate qualifications are demanded to secure good supervisors.

The duties of the supervisor are these, namely: (1) To

represent worthily the department in which he serves, and fairly the policy of the superintendent whom he represents. For a principal to oppose the policy of the school superintendent is unfortunate for both; it is disloyalty to the best interests of the schools unless the opposition is open warfare, public and continuous, and designed to secure the removal of the superintendent. But for a supervisor to oppose the policy of the superintendent is a kind of school treason, and is essentially unforgivable. This is equally true whether the treason is secret or open, and whether the supervisor was appointed before or after the superintendent. This principle ought to be recognized by all teachers and ought to be enforced by all boards of education. (2) To hold regular meetings for the instruction of the teachers; to furnish them with outlines and programs; to counsel with them. (3) To exemplify his own art; to understand its inherent method; and to be able to correlate it with other school subjects. (4) To organize exhibits (or entertainments) by which the school children's proficiency in the supervised department may be shown to all persons interested. (5) To supervise the work of all teachers who give any instruction in his art and to report thereon to the superintendent. (6) To give in the classes lessons in the art for the instruction of the children or of the class teacher or of both. (7) To grow in knowledge and in skill; that is, in both general and technical knowledge, and in skill both as an artist and as a teacher of the art.

The supervisorships are the weak spot in most small school systems, being relatively poorer in the persons occupying them than the principalships and the teacherships. The reasons are two:—

I. The supervisorships are a recent development.

II. They are hard to fill at the salaries these new positions are considered worth by the boards of education.

To illustrate a typical condition:* Superintendent, $3,000; high school principal, $2,000; elementary principals, $800 to $1,200;† supervisors, $600 to $1,000;‡ high school teachers, $600 to $1,400; elementary teachers, $450 to $675.

* These are the actual figures of a certain small city in the East, 1903–4.

† Paid to principal of a school of eight hundred children.

‡ Paid to general primary supervisor.

Leaving the maximums and minimums as they are, this would be a far more reasonable condition, namely: Superintendent, $3,000; high school principal, $2,400; elementary principals, $800 to $1,800; supervisors, $700 to $2,000; high school teachers, $600 to $1,400; elementary teachers, $450 to $675.

This latter arrangement undoubtedly involves spending more money, but it accords with certain fundamental and essential relations. It gives the supervisors higher salaries than any persons receive who are to be supervised. To send a thousand dollar elementary school supervisor to supervise the school of a twelve hundred dollar principal is to accomplish only bitterness. To send a six hundred dollar special supervisor to help a six hundred and seventy-five dollar teacher is equally unnecessary, for it can avail nothing good.

Without going for salary details, proper rank in salaries may be indicated as follows, namely: Superintendent; associate superintendent, if any; assistant superintendent, if any; high school principal; grammar or primary superintendents, or grammar and primary supervisors, if any; principals of elementary schools; supervisors of special subjects; high school teachers; elementary school teachers and kindergartners.

It is a fair question whether men or women make the better supervisors. It is my belief that men make the better administrators. As a general proposition, women make the best supervisors. They are more interested in details. They do not make as good associate or assistant superintendents, however. From the general proposition certain exceptions may be taken.

In the art of supervisorship women generally do better than men, but not in large school systems, because of their physical inferiority and lack of administrative powers. In music men do better. Their voices seem to attract the children more, and give a variety to the singing of the teachers. But at the same salary in a small system women are preferable, owing to the inferior character of men who care to take low salaries. Few women, however, can persuade many boys and girls to sing.

NOTE.—Undoubtedly length in office and size of school ought to be considered in the matter of elementary school principalships in the smaller cities. What subjects ought to receive the highest salaries is discussed later.

In manual training obviously the work for boys ought to be conducted by men, and that for girls by women. Similarly domestic science and art must be conducted by women.

Physical training: here it is best to have a man for the high school and upper grammar school, and a woman for all other students.

The primary grade supervisors, and special supervisors in nature-study, reading, kindergarten, ought to be women, because they deal most largely with the smaller children.

The medical inspection of schools ought to be conducted by men and women physicians. This inspection is now altogether too infrequent or too perfunctory. A separation of the sexes for this purpose is essential.

The supervisors of modern language instruction, when given in the elementary schools, may be high school teachers. Sex is a matter of indifference, except so far as the difference in salary is concerned.*

Of these various supervisorships the salaries are likely to vary somewhat for the following reasons, namely: (1) The difference in the length and in the expense of the technical preparation. An art education takes many years, and is relatively expensive. (2) The difference in the experience of the supervisors. Almost inevitably some supervisors will be many years older than others. (3) The difference in the number of teachers to be supervised. Art covers all grades. Domestic art and science but few grades. (4) The difference in the difficulty of acquiring the knowledge and the skill requisite for success. This is a matter of native talent and of supply and demand on the market. (5) The difference in the supervisor's opportunity to earn money outside of his regular school duties; that is, some supervisorships require more before and after school work than do others.

Fortunate is the city that can avoid all this discussion by

* It is a hard fact, from which we cannot escape, that in this decade of the twentieth century men command salaries from twenty-five to a hundred per cent greater than women of equal competence. From this it is not to be concluded, as democracy has erroneously concluded, that there can be a good grammar or high school without men teachers. This is impossible; such an effeminate affair is a-symmetrical. It is a hotbed of feminine whims and tyrannies.

paying a uniform high salary regardless of the market for supervisors' services. Then to avoid all jealousies the superintendent must see that all supervisors do about the same amount of work daily, weekly, and yearly.

To illustrate: To the physical training teachers whose lessons begin later in the school season and end considerably before commencement, the superintendent may assign a light gymnastic exhibition; or if his city system has a gymnasium, a complete gymnastic exhibit. By some ingenuity and forethought these matters can be fairly adjusted.

Three comparatively new supervisorships (or inspectorships) remain to be considered: that of the physician, that of the sociologist, and that of the psychologist.

The medical inspection of schools has now advanced to the point of eye and ear tests, and to the effort to eliminate incipient contagious diseases. In connection with the physical training work may be made simple strength, lung capacity, and other tests. But these are by no means enough.

We have gone as a nation knowledge-mad in our schools. We think it none too much to keep a daily record of a child's mental condition, and to send home a monthly report of his mental progress. For his physical condition and progress, for his health, which is the foundation and the substance of him, we care little, sometimes nothing. Once in awhile we wake up with a shock to the fact that he is physically defective or to the fact that he is morally debased, a condition that more often results from physical than from mental causes.

Medical inspection of the school and of the individual is a protest and is progress. I believe in the following program and record, namely: Semi-annual inspection of each individual. (1) Each eye, right and left; (2) Color blindness, each eye; (3) Balance of eyes; (4) Each ear, right and left; (5) Throat and nose, for adenoid growths, etc.; (6) Lungs and chest; (7) Spinal system, for curvature, etc.; (8) Strength; (9) Nervous force; (10) Health, especially digestion and sleep.

As to each an illustrative note: (1) In a certain high school, upon the beginning of such inspection, a girl was discovered totally blind in one eye, and going blind in the other, who did

not know it. Result: Eye saved and other partly restored. (2) In an elementary school a boy who desired to become a designer was discovered color-blind in one eye as to red, and in the other as to every color. He was taught color for two years and was finally able to see all primary colors with both eyes. (3) I who write this article was blind for several years in one eye, due to suppressed vision, and was afflicted with a painful and apparently incurable disease of the eyes. After years of anxiety and of advice in both Europe and America, a few simple surgical operations by a skillful diagnostician and operator * restored my sight sufficiently to write this and other articles and books. A competent school physician would have saved me many years of pain and of other trouble. (4) Deafness is seldom painful, but as it is often a progressive disease, the sooner its presence is known the better. It is a dangerous disease in the modern world of steam and electric cars, of machinery, and of all manner of automobiles. (5) In a certain town a boy of fourteen was afraid to go up and down stairs; could not eat; would not study; looked fairly well. A teacher, who knew something about physiology, sent him to a throat and nose specialist, who removed seven adenoid growths from the throat and nose. Three months later the boy was the delight of his parents for physical energy and of his teacher for his mental power. (6) Consumption is too frequently discovered to justify mention of particular cases. (7) One in four of high school girls seems to have spinal curvature well begun, sometimes well developed. (8) An examination for strength is important before boys are allowed to play on school football teams. Every high school ought to have a gymnasium to remedy weak muscles. In a certain school the mother of a girl who was re-made by a year's gymnasium work,—she was an intelligent but a poor woman,—hearing that the politicians proposed "to close the gymnasium," offered fifty dollars from the savings bank toward its maintenance. This is the eloquence of fact. (9) By nervous force is meant speed and persistence and regularity. This is an almost perfect test of health. (10) To put an end to the drink-

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ing of strong coffee at breakfast, and to sleeping with closed windows, with two children in a bed, are two features of the program of the school's warfare against ignorance, disease, and poverty,—man's trinity of miseries.

The above are at best mere illustrations and suggestions. The importance of the subject in the sphere of school administration is by no means indicated by the small space given to it here. I could easily fill a hundred pages. The real trouble is that horses, houses, and shoes cost money; boys and girls do not. Moreover, it has not yet been sufficiently "hammered" into the consciousness and the conscience of men that "we are all members one of another."

To illustrate: A certain man of property gave his only daughter a most elaborate education. A neighbor's son desired to go to college, and applied for assistance by the influence of the rich man and by loan of money. He got neither. However, he went to college, working his own way. After graduation the girl and the youth fell in love. To break the match the rich man took his daughter to Europe. The youth, overworked, died of hasty consumption. Four months later the girl died of "nervous prostration" and a "broken heart." This was in New England.

To illustrate again—this time from the Middle West: On the prominent street an only son, and heir to a fortune. In the back alley a family of the poor, with scarlet fever, neglected until far advanced. The poor children went to a hospital and lived. The rich boy took the disease and died. Verily, when one member suffers all the members suffer with it.

A third illustration in a great American family, so rich, so strong from generation to generation as to amount to a dynasty: A son married the beautiful daughter of several generations of the poor. The care of her station and its strange surprises sent her to an asylum at forty—a helpless lunatic. Her three sons are there to-day.

"They are not my children," the man of culture, or of blood, or of station, or of power, or of wealth, may say. Very true. But they may be the wives or the husbands of your children, or the grandfathers or grandmothers of your grandchildren.

In a certain city there arrived one day a young man utterly unknown; within two months he had met the heiress of the city's richest man; within a year she was an abandoned wife with a child; and within two years the child's father was in the penitentiary for forgery, with an indictment for bigamy over his head. And the young man proved to be a product of one of the rich man's slum tenements, a product veneered by a few years' service as the valet of rich young men.

Eternal vigilance is the price of liberty; infinite solicitude for others is the price of safety. This line of argument serves for the two other supervisorships. The sociologist is needed in every considerable school system to advise regarding courses of study, location of schools, plans for school buildings, parents' associations, neighborhood clubs, evening lectures, boys' athletics and games, mothers' clubs—whatever concerns society. His business is to know and to understand all localities. He is needed because the school is becoming the new integrating social center.

Similarly, the psychologist is needed to pass judgment upon all individuals with any peculiarities of note. He is to forestall all wrecks. Let him study pedagogical methods, nascent interests, mental traits of all kinds. Let him diagnose and prescribe. Such a man can do more good than a big library of books, because he is a library of knowledge ready for use. The sociologist and the psychologist may often assist and supplement each other. They should be of opposite sexes, so as to see things from opposite points of view. The woman will be the sociologist and the man the psychologist.*

*I offered this suggestion seven years ago—eighteen hundred and ninety-seven. It was evidently in line with the march of events. Four years ago a consulting psychologist was regularly employed in one city. There are now several such psychologists in as many cities. The work of both sociologist and psychologist is now actually being done, but to differentiate their functions out of present positions and to integrate them in new and definite positions is to make vast progress.

The Binocular Photograph

(Stereograph)

Its Application to Geography Teaching

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THE remark of Professor Sully that visual images or pictures constitute the staple of our ordinary recallings is worthy of more than a passing thought. To recall our home, school, friend, garden, does not mean to bring to the mind something heard, but in ninety per cent of cases it means to reproduce a mental picture of these things – to visualize them. In proceeding then to the unknown, as to a study of a strange and foreign people, how much more necessary it is to provide the student with some concrete basis for his visual concepts.

One purpose of mental imagery is suggested by Emerson: "A man conversing in earnest, if he watches his intellectual processes, will find that a material image more or less luminous arises in his mind contemporaneous with every thought, which furnishes the vestment of the thought. * * * A new interest surprises us whilst, under the view now suggested, we contemplate the fearful extent and multitude of objects; since 'every object rightly seen unlocks a new faculty of the soul.' That which was unconscious truth becomes, when interpreted and defined in an object, a part of the domain of knowledge — a new weapon in the magazine of power." A direct inference from such a philosophy is that an increase in number and distinctness of mental images means a corresponding increase of intellectual force and that there is a rich benefit in a "manifold contact with the actual."

Verbal descriptions, however intense the interest may be, fail utterly at the vital point. A description may be so accurate and the imagination of the student so vivid that he is able to visualize quite clearly an object which he has never seen either in the original or representation; but he will never by this method be made to feel that he has seen it. The image will

never become a part of his life — the "vestment of his thought" on the subject. Witness the experience of Enoch Arden: —

> "Now, when the dead man come to life beheld
> His wife, his wife no more, and saw the babe
> Hers, yet not his, upon the father's knee,
> And all the warmth, the peace, the happiness,
> And his own children tall and beautiful,
> And him, that other, reigning in his place,
> Lord of his rights and of his children's love,—
> Then he, though Miriam Lane had told him all,
> Because things seen are mightier than things heard,
> Staggered and shook, holding the branch, and feared
> To send abroad a shrill and terrible cry,
> Which in one moment, like the blast of doom,
> Would shatter all the happiness of the hearth."

There was certainly no want of interest or attention on the part of Enoch Arden in the history of his family as it was originally related to him by Miriam Lane. She had stated all the facts with a cruel impartiality; but it was the seeing that overpowered him. As he looked through the window of his successful rival's home, no sound reached him, nor was any necessary to fill completely his cup of woe. "Things seen are mightier than things heard," or, as Professor Sully has expressed it, "One seeing is worth a hundred descriptions." *Segnius irritant animos demissa per aurem, quam quae sunt oculis subjecta fidelibus.* *

The normal plan of mental development is marked by three stages. First, the acquisitional. During this period the young child is occupied with acquiring material — accumulating the raw sense data of perception from which he will afterwards by apperceptive processes elaborate his own concepts. This data must come through the senses, and much more will in the end come through the sense of sight than by all others combined.

Second, the elaborative — during which the materials are examined and recombined and the young mind gradually adjusts itself to its environment.

Third, the expressional, the beginning of which is marked by the dawn of the desire to show the world to others as it appears through the lenses of his mind. To be sure, the first overlaps the second, and the first and second extend into the third; but

* "Things seen by the trustworthy eye more deeply impress the mind than those which are merely heard." — *Horace.*

the periods when each begins, reaches its maximum development and wanes, are quite clearly marked in the normal individual.

We are concerned now more properly with the first, the acquiring of the data of perception. We know how the sense of sight gradually increases in importance until finally it is the chief avenue of approach to the mind. That visual impressions are the most vivid, the most lasting and the most comprehensive, is now a well-known fact. Literature suggests it; science recognizes and countersigns it with the stamp of its authority. Corollary to this we may say that visual instruction should be practiced whenever possible, especially in the primary and grammar, and even into the secondary schools, bringing the student face to face with the visible world as a place for man's habitation and with man himself as an inhabitant of the earth. This is done by travel, or by any other means by which the original can be shown to him. But as such a method would be impracticable with the vast majority of children, an effective substitute for travel has come to be one of the recognized needs of the school. The first step in this direction was in the use of pictures.

The general use of pictures in school dates from the publication of the *Orbis Pictus* by Comenius nearly two and a half centuries ago. In this book the "distinguished Moravian" undertook to bring the visible world to the child by pictures in lieu of material objects. Following the Aristotelian principle, *Nihil est in inteltectu quod non prius fuit in sensu*, he spared no effort to place the material for sense perception within the reach of the child. The author says "to exercise the senses well about the right perceiving the differences of things will be to lay the grounds for all wisdom and all wise discourse and all decent actions in one's course of life, which, because it is commonly neglected in schools, and the things which are to be learned are offered to scholars without being understood or being rightly presented to the senses, it cometh to pass that the work of teaching and learning goeth heavily onward and affordeth little benefit."

The publication of the *Orbis Pictus*, which was for a time the "most popular text-book in Europe," marks then the beginning

of the movement in favor of pictures as a medium of instruction —a movement which has received a decided impetus within the last two decades. The engravings of Comenius' book are of the rudest sort, and it is partly to the improvement and cheapening of illustrations, especially in photography, as well as to the increasing demand for such material, that the impetus above referred to must be attributed. The illustrations in current use in the modern schoolroom consist chiefly of cuts of varying degrees of excellence, made usually from single monocular photographs. When photographs are not available the illustration is made from a drawing. The stereopticon, or magic lantern also, is now used in many schools, and has its own peculiar advantages. It is very rarely, however, that the original photos themselves are used.

But the device that is acknowledged to be far superior to any and all others is the stereograph, which consists of two photographs taken simultaneously from points as far apart as the two eyes. These two are then blended into one in the stereoscope, and the result, through utilizing the powerful influences of binocular perspective, is to cause the student to feel that he has suddenly been taken to the country he is studying.

With the principles of binocular vision not all are familiar; so, before proceeding to an examination of the comparative value of monocular and binocular representations, may we not glance hurriedly at some relevant statements of recognized authority. Professor Ladd says, "But visual space, as experience makes it known to us, requires binocular vision with moving eyes." And again: "But all the achievements possible to a single eye, when open and in motion, would not avail to produce the presentations of sight as our ordinary experience is familiar with them. Strictly monocular vision is for the most part a fiction of science." The author further proceeds to show how the visual impressions we do really get with one eye alone are supplemented by recollections of experiences previously acquired with both eyes working together, thus reaching logically the conclusion that strictly one-eye vision does not exist. He answers the old puzzle, "How do we see only one object when we have two eyes? Why do we not see two objects?" by

the dictum that two eyes working together are an absolute necessity if we are to get a correct visual impression; so instead of being confused by considering how we can see with two eyes, it is clear that we cannot see well without them.

Now it is plain that a representation cannot in any case furnish all the data of vision at first hand; that is, no picture can be altogether as good as original sight. But it is just as clear that as far as monocular vision is inferior to sight with both eyes, at least so far will monocular representations be inferior to those which are in accord with the principles of binocular vision. Indeed, a moment's reflection will show that more difference exists between monocular and binocular photographs than between natural sight with one eye and with two; for all photographs lack color and motion, both of which operate as an aid in compensating for the loss of one eye in natural sight. These being absent in the photograph, the mind is, in the case of the single picture, thrown back on the bare resource of monocular perspective, and must form its judgments of depth, distance, and relative size of objects chiefly from lights and shadows and receding lines; while in the binocular photograph the mind has besides these data the powerful aid of the double images and convergence of the two eyes.

There is also to be considered the necessity of excluding from sight everything which is not characteristic of the scene to be studied. In the contemplation of pictures this is never done. The student sees the book, desk, room, playmate; the illusion is so fleeting, so incomplete, that he never for an instant regards it as he would the original. But is this true with the stereoscope? First, he has an image on each eye, and they differ to just the proper degree; second, his eyes turn toward the nose in combining these pictures just as in natural vision; and third, his eyes are enclosed by a screen, and he must think that he is in Egypt or Cathay. It is not reasonable to expect a student to feel that he is in China when his eyes tell him that he is surrounded by American children in an American schoolroom—when, in brief, the atmosphere is American. All are familiar with the case of the telephone. If anything could make one feel that he is in Buffalo when he is really in New York, it

would seem that it would be the telephone, for the voice which he hears and recognizes tells him that the person who is speaking is in Buffalo. But the fact is, instead of inducing in us the sensation of being in Buffalo, we feel that our friend is here in New York; we even emphasize our utterances by gesticulations, as if he were present and could see them. But, after all, this is a phenomenon that is easily accounted for. We always feel that we are just where our eyes bear testimony that we are. The messages of the eyes are always given more weight in the formation of judgments than those sent by the ear when both messages are received at the same time. To feel that I am in Buffalo when my eyes tell me that I am in New York is just as impossible as for the child to feel that he is in China when his eyes tell him that he is not. Obviously, then, the remedy will be to give his eyes but one message to report to the brain, all others being canceled; and let that message be: "This is China; there is the pagoda (you know the peculiar architecture); there is the Chinaman (you recognize his dress, and you have seen the queue). Why, this is a Chinese atmosphere! And what is that plant? And what are these coolies doing?" The stereograph has delivered its message. Then the student finds (and usually from another source) that he is actually looking at a tea field. He has seen tea,—perhaps he has drank some,—but he never knew it grows that way, is cultivated that way, by those strange people, in that strange land. But there are the clouds—the same as in our sky at home; there are the shadows—just as bodies cast in the sunlight at home. This is all *terra firma;* it is not wonderland, it is not magic; it is the plain, unvarnished tale delivered by the eyes to the wondering, inquiring mind of the child. Hereafter, when he thinks "tea field" there will rise in his mind, not a recollection of verbal descriptions he has read, not a pale, mirage-like image of some picture he saw,—an image which recedes as he tries to approach it for analysis,—but there will "flash upon his inward eye" a clear, solid, substantial, accurate image of a real tea field. And its setting will not be a schoolroom, lecture room, book or art gallery, but he will think "tea field" in China. He has "seen with emotional sight." He knows and feels that he knows.

The History of Economic and Political Studies in Williams College

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HISTORICAL and political studies seem to have been almost wholly neglected in the American colleges of the colonial epoch. In this direction the first serious impulse came from the stirring discussions of the Revolutionary period and of the years that witnessed the adoption of the Federal Constitution. In 1784 the first law school was established at Litchfield, Connecticut; and during the next twenty years lectureships or professorships of law were created in various institutions. Before this movement had spent its force, political philosophy, political economy, and, in some cases, history had benefited by the interest thus aroused, so that one or more of these subjects found a place in the curricula of many colleges.

The "Free School" at Williamstown was transformed into Williams College in 1793, at the very time when our institutions of higher education were beginning to recognize the importance of training young men for the legal profession, the service of the State, or the common duties of citizenship. In the first invoice of books purchased for the college library, political and historical works were well represented; and upon October 20, 1794, Hon. Theodore Sedgwick, at that time a member of Congress, was appointed Professor of Law and Civil Polity. It does not appear that Mr. Sedgwick ever entered upon the work of his professorship—a fact which may be readily explained by his absorption in the duties of public life or by the meagre resources of the college; but it is interesting to note that this was the first professorship which the trustees attempted to establish.

In 1795 the first laws for the government of the college were adopted. From these we learn that the studies of the fourth year were "metaphysics, ethics, history, the law of nature and nations, civil polity, and theology." Thomas Robbins, a member of the class of 1796, writes in his diary, under the date

of January 1st of his senior year, "Reciting now Paley's Moral Philosophy"; and under the date of March 22d, "Began to recite Vattel." Instruction in these subjects was given by President Fitch, as we learn from a letter * written by a member of the class of 1802 who says, "Those students who were instructed by him during their senior year will never forget the ability and interest with which he explained and illustrated the writings of Locke, Paley, and Vattel."

The facts just mentioned are sufficient to establish the character of the instruction given in political philosophy and international law; concerning the study of history, however, no evidence is now available. Paley's Principles of Moral and Political Philosophy, published in England in 1785 and republished in Boston ten years later, devotes one entire book—the sixth—to the philosophy of the State, and treats of such subjects as forms of government, civil liberty, and the administration of justice. This book was used for many years at Williams, as elsewhere. Its author was a conservative by temperament, and a friend of the established social and political order; and these qualities would naturally commend his writings to such an ardent Federalist as President Fitch, who was greatly disturbed over the revolutionary movement in France and the rise of Jeffersonian democracy in the United States.† In his baccalaureate sermon of 1799, Dr. Fitch warned the graduating class that "every civil and religious institution is threatened with ruin," that "the principles of deism, atheism, and disorganizing politics have of late years made rapid strides," and he urged his hearers to oppose manfully the progress of these destructive tendencies.

This arrangement of studies probably remained unchanged for many years. The College Laws of 1805 repeated the provisions of those adopted in 1795; the Laws of 1815 are more general in their terms, but prescribe that history and the law of nations shall be included in the curriculum. These subjects, undoubtedly, fell to the charge of the president. In 1812 Hon. Daniel Dewey was appointed Professor of Law and Civil Polity, but it is not known that he ever gave regular instruction

* Durfee, History of Williams College, p. 77.

† *Cf.* Perry, Williamstown and Williams College, pp. 230–233.

in the college, although his name appeared in the catalogue until his death in 1815. The laws of the latter year state merely that "the Professor of Law shall occasionally deliver lectures to the senior sophisters or to all the students."

In 1822 the catalogue of the college contains for the first time a statement of the courses of instruction. From it we learn that history was one of three subjects studied during the third term of the sophomore year, and that Tytler's Elements of History was used as a text-book. In the senior year Paley's Political Philosophy was studied during the second term, and Vattel's Law of Nations during the third. Altogether, one third of the instruction for three terms, or about one twelfth of the college course, was devoted to these three subjects. History was probably taught by one of the two tutors who had charge at this time of most of the studies of the lower classes; the senior courses were conducted chiefly by the president.

In 1827 William Porter was called to a newly established chair of Moral Philosophy and Rhetoric, and he appears to have relieved President Griffin of most of the instruction of the senior year.* Paley's Moral and Political Philosophy was now replaced by Say's Political Economy, of which an American translation had appeared in 1821; Vattel's Law of Nations, however, was retained several years longer. History held its place in the third term of the sophomore year.

In 1828 a Manual of Political Economy, by Willard Phillips, was published at Boston, and this work was immediately introduced in the place of Say's treatise. When we recall that in this year the passage of the "Tariff of Abominations" stimulated excited discussions of the tariff question, and that Phillips was an advocate of protectionism, we may venture upon the conjecture that Professor Porter was dissatisfied with the teachings of Say concerning freedom of trade. At any rate Phillips' Manual continued to be used in the college for a number of years. When Mark Hopkins was called to the chair of Moral Philosophy in 1830, Paley's work was reintroduced, but only to supplement and not to displace Phillips and Vattel.

In 1835 Joseph Alden was called to a new professorship of Rhetoric and Political Economy, and more adequate provision

moir of W. A. Porter, p. 41.

was made for instruction in political and economic science. In his inaugural address in 1836, President Hopkins alluded to the recent introduction of the study of political economy, and expressed the hope that means could be provided for instruction in constitutional law. For this a place was found in the same year, when Professor Alden discarded Vattel and introduced Story on the Constitution. The sophomore course in history remained as before, and, after a time at least, came under the charge of Professor Alden. In 1837 the course in political economy was shifted to the first term of the junior year, and in 1840 Wayland's well known treatise was introduced as a text-book. Professor Alden was a Jeffersonian Democrat and a free trader, but seems to have made more of his lectures upon the the United States Constitution * than of his work in history and political economy. In 1843 a course in American history was introduced in the second term of the junior year, and in 1844 this was placed among the studies prescribed for sophomores. Two years later, however, this subject dropped out of the curriculum.

At this point it will prove interesting to compare the development of political and economic studies at Williams with their history at a sister institution, Dartmouth College.†

At Hanover these studies were first introduced in 1796, under the stimulus of the same influences that were felt at Williams in the previous year. In Dartmouth the juniors were given instruction in Paley's Moral and Political Philosophy by the professor who had general charge of that class; while the seniors, under the guidance of President Wheelock, studied Burlamaqui's Principles of Natural and Politic Law, of which an American edition had been published at Boston in 1793. In 1804 the course in political philosophy was transferred to the charge of the Professor of Divinity, and in 1823 to the Professor of Moral and Intellectual Philosophy. In 1822 instruction in constitutional law was given to the seniors, and in 1828 a chair of Moral Philosophy and Political Economy was created. Professor Roswell Shurtleff, the incumbent of this chair, intro-

* *Cf.* A. L. Perry, Miscellanies, p. 142. Williamstown, 1902.

† See J. F. Colby, Legal and Political Studies in Dartmouth College, Hanover, 1896.

duced Say's Political Economy in the place of Burlamaqui's Natural and Politic Law; and continued for a decade the use of Paley's Political Philosophy and the Federalist. In 1838 Paley was replaced by Wayland's Moral Philosophy, and in 1842 a course in Kent's Commentaries on American Law was offered to seniors. Some years later the latter work was displaced by Story's well-known treatise. The general similarity of development in the two institutions is emphasized by the fact that Dartmouth, in 1808, made unsuccessful efforts to establish a professorship of law.

At Williams the next important event was the resignation of Professor Alden in 1852. After an interval of a year, Arthur Latham Perry was called to a professorship of History and Political Economy; and commenced those studies, especially in the field of political economy, which soon brought him a national reputation and secured distinguished recognition in France and England. Although compelled by the poverty of the college to give instruction in German and in Christian Evidences for many years, he soon built up a strong department of history and political economy. To the sophomores he gave instruction in history, at first for one and later for two terms, introducing newer and better text-books, as they appeared, in place of the wretched treatise by Tytler. To the juniors he offered a course in political economy for which he published, in 1865, the first of his well-known books, Elements of Political Economy. In addition, Professor Perry continued the work in constitutional law which had been begun by his predecessor. This study was, in 1859, transferred to the junior year, where it long remained; at the outset Story's work was used as a text, but in time the instruction came to be given by lectures. Upon an average, during the period from 1857 to 1887, the three subjects above mentioned occupied about one-eighth of the entire college course, and until the latter year they were required of all students.*

In 1871 Orrin Sage, a Massachusetts manufacturer, gave the college $50,000 as an endowment for Professor Perry's chair. In part, at least, this action was the result of the attacks which

**Cf.* A. L. Perry, Miscellanies, pp. 141–148.

had been made from time to time upon Professor Perry's views concerning the injustice and inexpediency of the protective tariff. The trustees of the college had at all times upheld the independence of the department of political economy, but the gift was prompted by a desire to place the chair upon the most secure foundation possible. So far as freedom of teaching is concerned, few, if any, American colleges can boast of better traditions.

In 1882, with the coming of the elective system, there was established an elective course in European history, conducted by a new instructor. This marked the beginning of the separation of the departments of history and political economy, which became complete when, in 1890, an endowment was received for a chair of American History. In the following year Professor Perry closed his long term of faithful service to the college, and John Bascom was made acting professor upon the Orrin Sage foundation, which was thereafter devoted to the department of political economy. Thus at the close of the first century of its existence, Williams College had created two independent departments for the studies in which, at the outset, the president had instructed the seniors during the last half of the collegiate year.

With the history of the last decade it is not the purpose of this paper to deal. Suffice it to say that the establishment of new chairs of Political Science and of European History has enabled the college to extend and to specialize instruction in these subjects, so that now four professors are cultivating the field where Professor Perry labored so long and so successfully as Professor of History and Political Economy. In all this the college is but meeting the demands of the times for more extensive instruction in political and economic studies. To-day, as in 1794, it is attempting, so far as its resources permit, to prepare young men for the intelligent exercise of the rights and duties of citizenship; and now, as formerly, it seeks to prescribe, for students or teachers, no tests of political or economic orthodoxy. With such a record of honorable achievement, the college faces hopefully the educational demands of the twentieth century.

Lessons in Genetic Psychology and its Relations to Modern Pedagogy

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IV

(*Concluded*)

The Feelings or Sensibilities—the fountains and feeders of thought, the prompters and promoters of will power—involve the following operations and conditions. There are two general varieties, determined by the origin or sources whence they spring, as

1. The purely PHYSICAL SENSIBILITY, produced by sensations through nerve sources or senses, by means of the power physical objects have to impress mind, etc. (See "Origin of Thought," article No. 1.) It may be described by the following

DEFINITION XV

Causatively, as: The susceptibility or capacity the mind has to receive impressions from physical sources (through the senses), and to experience corresponding changes or nervous agitations, as revealed in and through consciousness; or, as purely *mental phenomena*, it is these sensations themselves which the mind receives or experiences from these known causes—the contact with externality. It also includes some forms of instincts, appetites and desires.

2. PSYCHICAL SENSIBILITY, or that which is purely subjective (see "Origin of Thought," second part), may be described by the following

DEFINITION XVI

As: The susceptibility the mind has to experience those psychic changes or agitations of the soul, not objective in source or origin, but purely subjective, though often set in motion through the action of the senses, as in sights and sounds affecting the soul. They embrace the emotions, affections and desires, of which the variety in character and degree is almost infinite; as in pleasure and pain in all their varieties, in joy and sorrow, in

hope and fear, in delight and despair, in love and hatred, in anger, scorn, contempt, rage, fury, frenzy, etc., all expressions of some of the forms in which our feelings manifest themselves.

3. There is also a *vital sensibility*, or the sense of vigor and languor, health and disease, heat and cold, rest and fatigue, etc.

NOTE.—In the study of this variety of mental phenomena the class will find great delight and profit, inasmuch as they reveal many of the elements that go to form human character. Moreover, in learning to analyze and classify these emotions, affections and desires, they learn their real character and value, and how to cultivate and control them in their lives.

THE HUMAN WILL

In presenting this third and last-mentioned power of the mind, we can do no more than give a very brief outline or statement concerning it. The subject is so vast that to attempt anything more would involve arguments and space that would be out of harmony with the plan of this series of articles. Its nature and office, that have already been alluded to in connection with other mental powers, may be inferred from a brief yet more formal description given in the following

DEFINITION XVII

The Human Will, the motor of the mind, is that self-determining power it has to order its own movements on the line of possible contingency; to make its own voluntary choice, and to execute its own decisions. Most of these decisions are reached

1. By a comparison of weight or force of respective incentives or motive, which weight or force the will has power to accept or to set aside as it may determine. There is no compulsion either way outside the *will itself;* and motive is powerless to impel, since it has no existence save in the future or in prospect. The will, therefore, is free to act, to choose as it may determine. It is even master of its own volitions, since these are acts of the will itself.

2. It has also *executive energ-y* (ἐν, in + ἔργον, work = inward work) or power to execute its own decisions—what it designs—the execution of which is subject only to will power "on the line of possible contingency," since no power is capable of executing impossibilities. Volition itself, which is only an

act of the will, is therefore stronger than any motive or incentive, since it may refuse or accept either, irrespectively of any strength they may possess. Much more then is will, as an act of the mind, stronger than any incentive or motive, however great. It is therefore transcendental; and it is moved to act only by those innate resolutions and determinations wrought in the higher departments of the soul's faculties, and not by mere outward solicitations, strength of desire, or weight of incentive, however great. The very fact that the will has power to act at all, implies that its decisions are imperious and from within, otherwise there could be no decisions. Its acts are therefore regal, unimpeachable, and independent of any "highest motive or strongest incentive," Herbartianism to the contrary, notwithstanding.

3. The will may be cultivated and strengthened by legitimate use. It may be bent, but it *never* should be broken. It were better that every bone in the child's body be broken than to break that which God intended to be a guide to every high and noble purpose in life; a safeguard against evil and every temptation to wrong. Children should early be taught to say No to every solicitation to wrongdoing or selfish desire; and, on the other hand, to say YES to every noble sacrifice of selfishness, and to every solicitation to good and noble ambition. Every lesson in school life, in home life, in business, and pleasure, abounds in opportunity, even in solicitation to cultivate will power. It is the crowning excellence of education to fortify the soul against the encroachments of evil, and to establish it in the love of duty, and in the love of the beautiful, the true, and the good.

THE LAWS OF LEARNING AND GROWTH, OR THE MIND AT WORK—HOW IT GROWS

I. When we assert that every want in nature has its co-existent and co-extensive supply, adequate in all respects to its necessities; that every appetite has its characteristic food, stored away somewhere within reasonable reach, and that the mere getting of this supply educates the subject of it; that there are no blunders, nor hiatuses anywhere within the domain of

natural law; but that where they have been supposed by certain explorers to exist, on closer inspection they have been found to exist in the supposed discoverer; that all of nature's provisions are on a scale of infinite magnificence and wisdom, all tending to the same grand, purposeful end, the perfection of MAN—the embodiment of nature's best elements; that her entire operations proceed with marked uniformity and exactness; that they are all friendly to every order of being created; that the whole animate and inanimate world are planned, the one for the accommodation of the other; and that these again are all designed to administer to the higher intellectual, moral, and physical wants of MAN, we only declare that order and design reign everywhere in all departments of the universe, from the grand sweep of worlds and systems through space to the almost imperceptible quiver of the minutest atom that floats in the life-cell of a plant or an animal.

II. This order and this design manifest themselves in a marked degree in the growth and maturing of the higher order of beings, commencing with the lowest order of plants and animals and culminating in man, the highest order of animals. Each higher order is nourished and sustained by those mediately below it, all merging into and aiding in the perfection of the highest. This law covers what we sometimes call "natural selection" and "the survival of the fittest."

III. The growth, development and perfection of all these orders in common are regulated by forces operating strictly in obedience to a law inflexible in its behests; so that the infringement or neglect of the requirements of this law is followed by corresponding defects in the growth and maturity of the subject of it; while, on the other hand, obedience to these requirements, even in the minutest detail, is as certainly followed by the healthiest growth and highest development of the subject of it.

This is observed in the careful cultivation and growth of all plants and animals, and the law is certainly not less binding in the education and growth of man, where and in whom all these antecedent forces center and culminate. The world to-day in all its beauty—and not less in its deformity, morally, phys-

ically, and intellectually—is just what the operation of these forces have made it. And the most encouraging thing about all this is that these forces are subject to man's direction and control. God has thus, wisely, we think, put our education into our own hands. Angels would probably make poor teachers. They would scarcely be able to make due allowances for all our weaknesses and dullness, to say nothing about our meanness; and we certainly do not want those *other fellows down there* to be meddling with our affairs, however much they may have had to do with upsetting things in the past. Man must educate himself, for self-made men are the only real, manly men we have nowadays. And the life work set for him in natural environment will do this in every case if it be properly disposed. Hence his school life and work should be an epitome of his world life.

IV. There is a natural and necessary connection between the subject of growth, or education, and the occasion of it, or the forces that nourish it and minister to it. That connection broken, or the proper forces ignored, and disorder and failure ensue. From this result or penalty there is no escape. Any plan or system, therefore, for the education of man, in order to secure the best results, must conform to this order of growth. Instead, therefore, of putting the child upon the mere search of knowledge, through which he is supposed to secure this development, though in a haphazard or unnatural way, or through purely artificial channels, as charts and books of instruction,—generally bad imitations of nature at best, however skillful these devices may be,—he must fail just to the extent of the violation of this law. Experience proves this to be true; whereas, if he is made the recipient of truth through lawful channels, his improvement is correspondingly great, and his chances for success in life made more certain.

The object should be, therefore, in commencing a course of instruction and training for the child, to introduce him, at once and directly, to good environment, to whatever new things there may be in store for him in that environment, to the *real things* themselves, as far as possible, and not to their mere representatives, as pictures even, or words; not even their names

at first, or until *asked for*, so as to allow first impressions to deepen and to become strong and as accurate as possible, the percipience vivid and the concept formed, in part at least; whereupon the *name* becomes a necessity for designation and for differentiation, and the transfer from object to name, from the real to the ideal, is most readily made from concept to name. But there must be no haste. Nature has a thousand ways of indicating her want. "Ask and ye shall receive" is the law of God and nature, and no wiser or more benevolent provision ever existed. Hence the child must *ask*, or indicate in some way, his want; then give the name, the word. It calls to mind the object or the act or the number, quality, etc., ever after. The *word* is then his talisman. With it he conjures ideas and thoughts. With it he builds his monuments. With it he casts out demons—*he talks*. Nature demands it as surely as she does the blooming of the plant when baptized by dews and showers and sunshine. Language is the efflorescence of thought, and nature's laws are inflexible.

Thus the beautiful and necessary connection between the child and nature is kept unbroken, and may be thus maintained throughout the entire course; varied, to be sure, both in kind and degree, to all the conditions of age and advancement. The true education of man consists in most part in his mastery of nature. Nature becomes both his servant and sovereign. He rules and is ruled by her. He conquers her difficult problems, and mounts to the throne of his sovereignty as he gathers strength by struggle with these problems. Nature brings this compensation to all her votaries. She crowns him who carries her heaviest burdens and delves deepest into her hidden mines.

V. This close communion with nature reveals the important fact that the child's natural growth in knowledge and ability does not proceed in separate and independent lines, requiring separate exercises or studies for each; but commencing as from an initial point—a unit or *self*—it proceeds thus from within, outwards in all directions in about the same ratio; each line of thought, as for instance in a knowledge of color, form, place, distance, number, quality, etc., merging into and blending with each other, thus aiding and strengthening one another in force,

clearness and distinctness of impression, and consequently of thought *ex*pression when language is called into requisition. This may be continued up to the third, fourth, fifth, sixth, and even seventh year of the child's age, with such changes and additions of natural and artificial objects as the child want may require.

Every schoolhouse, therefore, should be a cabinet of curiosities and common things. Better still, every school should be a home,—a common *home*, with all the sympathies of the real home. It should be a little *world* where life and its activities and industries, its amusements and amenities, its opportunities and experiences, all conspire to lift the child into real life and love. The schoolroom should not be a *pen* wherein we are wont to keep cattle and sheep. Every schoolhouse should have attached, at least a quarter section of good land, some even more. "But what about our towns and cities?" They must also be expanded in a similar manner—the public domain is large enough. The children must have room to grow as God intended they should, and the towns and the cities must take care of themselves, must "move on." Health, happiness, future prosperity, morality, and religion, all demand these onward movements; and though the idea may appear extravagant now, to many of us, yet it or its equivalent will surely come to pass, for the demands of this age are imperative.

VI. But educative forces move in natural channels; and, if uninterrupted, they move in all directions outward from the initial center in about the same ratio, and not in fits and starts, or in one direction at a time, though there may be concentered intensity of thought, feeling and will at certain points. But sound growth is always symmetrical, as in the growth of plants and trees. Hence a text-book or guide that covers one of these characteristic lines,—as color work, form work, or language work, number work, and the like,—and follows the direct order of nature, or "natural selection," must necessarily cover all the others more effectually in all respects, in order to maintain unity and symmetry, than is even possible by attempting to follow one to the exclusion of all others, or even a part of them, since each one requires the aid of all the others in order to make the circle complete and effectual as an educative force;

i. e., to learn language well, as an expressive art, for instance, the child necessarily learns color work, form work, number work, etc., to aid his thought (and hence his language), and thereby learns the language better than he possibly can learn it by merely conning words and sentences set him by some stupid author without the necessary original thought (the best and most necessary part of the study) connected with and inseparable from the proper study of language.

Here then is an actual saving, not only of a multitude of — to him — meaningless books to perplex him with, but of more than one half the required time, with the added strength and accuracy of thought and expression which can never be secured by separating these naturally inseparable subjects. This will give the needed time for other industries so much needed in our courses. *Let there be but one book* and one series of lessons for each educational period (which is measured only by completeness of thought and expression) covering all these subjects in each lesson in such measure as shall make them mutually helpful up to the seventh or even tenth years of age; *and this book should be largely self-made.*

This may be hard on school-book publishers; but I submit, it is better to punish them a little now for their misdeeds in the past, than to continue to punish the children. I consider the *multi*-multiplicity of text-books a hindrance to true education. Too many books are like "too many cooks," etc.

VII. And lastly, the child in his natural processes of learning is a *creative being*, not a mere receptacle or even a copyist. In this he declares his paternity and his superiority to all other created orders. His impressions, received mainly from contact with the outer world through the senses (the planting process), generate concepts, ideas, and thoughts, as of color, form, place, number, movement, condition, etc., which must need find expression, must be born, else they perish or fade from mental vision, as we find to be the case, too often, in the lessons of the schoolroom; but born or expressed, they grow, increase by natural law, multiply as stock in trade when properly handled, and become to him *a book*. Hence the child, when naturally taught, makes his own *first book*, and he *loves* this book. It is *his* book, *his* thought, and he loves to add to it, to increase

his stock; and thinking, ever after he gets this start, becomes a pleasure, and not the drudgery we find it in the school falsely taught.

This book may not be a written book at first, but, nevertheless, a *book*—the *logos* of thought—a book he understands —the begotten thought—the remembered *word* that calls up its objects, acts, and qualities—the real language lesson not based upon mere words without thoughts, but a book of his own thoughts and not another's. These thoughts when thus born into word symbols must be cared for. They are the children of legitimate parentage. They are his own. His family pride is appealed to. These children must be nourished and quickened into a body of knowledge—a *book;* and, as said before, it must be his own individual knowledge, bearing his own "image and superscription," wrought out by his own efforts, aided only by suggestion; and as he proceeds the *hand* is called to his aid. The *book* must be his handiwork—a creation from hand culture. The hand thus becomes an expressive organ embodying the sense of touch as revealed in after years in painting, sculpture, and other arts. It, like the tongue—the interpreter of oral thought—must early be trained *to tell the truth* in form, in color, size, proportion, and the like, and later on in the written word, the sentence, paragraph, and page. These are some of the first steps in the *child's own book* wrought out scientifically, naturally, in color, form, place, number, quality, uses, language, all in the same lessons, or so much as may be demanded for a certain grade or advancement.

VIII. Now all these conditions, like the embryo oak in the acorn, appear in the same lesson and must be provided for in the same lesson, since the child thought, to be complete, necessarily embraces them all; *i. e.*, he cannot think of one of them, as number, for instance, — for his ideas or concepts are mostly concrete at this point, — without implying many others, as color, place, quality, etc.; hence they must not at first be separated in thought or practice, or we weaken impression of all, and destroy the unity of thought.

Here then is the key to the true order of thought, which suggests the order of classification of the objects whose conditions and properties invite thought. The first classification should

contain a list of such objects as can most conveniently be used, a collection of which, more or less complete, should be kept on hand in the schoolroom, from which collection selections should be made for class work; each child, as far as possible, being supplied with specimens during recitation, for observing, locating, experimenting, numbering, describing (orally at first); each child giving *first*, the name, *second*, the place, *third*, the number employed: as, this is a pebble, or these are pebbles; here is one pebble in my right hand and one pebble in my left hand; and one pebble and one pebble are two pebbles. The pebble is on my desk; there are two pebbles on my desk and one pebble in my hand; two pebbles in my hand = (put them together) one pebble is white, two are brown (repeat the ±); two pebbles are round, one is flat, rough, smooth, etc.; aggregating and segregating as before, vary the objects in kinds, in number, in qualities, up to any desirable point, but never to weariness. The variations are practically limitless, as anyone may see by practice.

IX. During this practice with objects, things, persons, places, etc., or as soon as the pupil has learned to write fairly well, let the names and number and place of objects be written and read by the pupils, individually and interchangeably, adding qualities and brief histories of some of them in complete sentences, recording them on blank leaves in lesson books prepared for this work. This, with the reading exercises from other sources, with plays and games and manual training, may extend through the first school year, and may be called *The Presentative Period*, or The Real Object Period, because objects are the principal sources of knowledge, leading up to what is called *The Representative Period*, or Pictorial, Symbolic Period, which ends in *The Rational or Elaborative Period*, each occupying as much time as circumstances may demand.

NOTE I.—These exercises, as here presented, are by no means new or strange. All up-to-date teachers of young children practice them, and many others not shown here, though equally good or better. They commence in the kindergarten, and much earlier in well regulated homes. The object of alluding to them here is simply to show their connection with the "laws of learning and growth." They are legitimate, and hence should not be dispensed with in any grade up to the university, only changed to suit age and advancement. They end only in full-fledged industries of all kinds; and the best thing about them is they *educate* as nothing else will or *can*. They must be recognized to their full extent eventually. Carried to their legitimate limits, and properly associated with other school work, they will put an end to a very large part of the useless contentions that even now threaten the very existence of our social and economic systems.

NOTE II.—These lessons will be followed, in June or September, by one more on "The Mind at Work," indexing all the topics, so that those wishing a guide in the further pursuit of this subject may have one that will be suggestive at least.

Music in Elementary Schools

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ONE who has taught music continuously for thirty-three years has obtained ideas about teaching music, to say the least. Whether those ideas are judged valuable or worthless depends upon the judge and what advantages he has had to qualify himself for judging. One who has not had half a hundred pupils to teach, or a class just one hour a week, and has not been responsible for the pupils' adequate preparation in music to enter the high school, has missed one important qualifying experience. If he has learned to read music simply by playing some musical instrument, piano, organ, violin, etc., he cannot understand the difficulties that beset the learner who has no musical instrument except his own voice, which often travesties anything musical.

He may think that everyone should learn as he did, that everyone must necessarily go over essentially the same road. Of course, if he learned to read music by being taught to play an instrument, he had no need of using the syllables, do, re, mi, which he probably calls crutches, because they have to be discarded at last. Since he has never found any need of them in his own experience, he is no judge of their value in aiding others to read music now or during the last century. If he has not met many cases of "arrested development" on account of trusting more to children's memories than to their eyes and reason, he cannot judge of his own blindness, much less of the children's. If he has not worked hard an hour or two every day to develop and keep in good condition his own hands or his own voice, he is no judge of what can be accomplished of any permanent value in training the voice, teaching the rudiments of music, and singing at sight, all in one hour a week. He may claim that music should have a good deal more time; but unless he knows a good deal besides music, has studied many branches of knowledge and their educational values, he

is a most unsafe person to decide what time should be given to music in a general scheme of education.

In fact, no specialist without broad qualifications in other lines should be allowed to plan for a general course of study. He invariably magnifies his own specialty and undervalues other specialties, and may be likened to a school gardener who, by looking constantly at his own bed, invariably gets it out of line with other beds. He should go away from his own bed and look at it over the others, so as to get it in line. The specialist crowds his work as far forward as possible, and for the last quarter of a century every committee of specialists that I have been connected with or read about has laid out work enough in one line to take the whole time of the whole course.

It may seem unreasonable to demand that supervisors of music should be broadly educated if they are to decide how music is to be taught in a general course of study in elementary schools, because music, like art, is long and time is fleeting, and music teachers have about all they can do to qualify themselves in the fine points of their own business without studying educational value and pedagogy—more's the pity.

So we have one cramming primary children with forty or fifty songs a year; or insisting on unmeaning syllables, loo, loo, la, la, etc., as unmeaning spots are used in designing; or calling numbers which cannot be sung continuously, instead of syllables which can be sung continuously; or wrestling for the soul of music by ear, instead of reading the alphabet of music by sight; or soaring on the wings of a transcendental dove, instead of walking on the firm earth; or insisting that every child can sing and likes to sing.

Well, there are diverse gifts, in spite of music teachers. There is music blindness as well as color blindness, and one who has taught music a single year and not discovered it is blind himself, with the probability of remaining so.

But to come down definitely to some of the points suggested. The best use that can be made of one hour a week in musical instruction is to teach pupils to read at sight common music, just as reading at sight is the main object of the reading hour. The reading hour should not be spent in committing pieces to memory and speaking them; neither should the music hour be

spent mainly in committing songs to memory and singing them. Some memory gems are to be taught, but reading books is the main business. Vocal drill, boxing the compass with ip, it, and ik, and oratorical declamations prepared with an unwarrantable and nerve-exciting amount of time happily have been buried, and the ghosts of these things should not be permitted to appear again in the garb of music. Let the children read music as they read books, and let them read and sing with the spirit and understanding also.

Personally I have no doubt that the syllables do, re, mi, used during centuries have been the most efficient means of teaching people who have not had musical instruments to read music quickly and accurately. The intervals in the musical scale can be learned quickly and accurately by their use. A constant and quick succession of intervals can be sung by means of them, while the numbers 1, 2, 3, etc., now coming into use to the great disadvantage of rapid singing, do not lend themselves to speed or continuity. The syllables are thoroughly adapted to the formation of musical tones, open as in the *a* sounds, and closed as in the *e* sounds. The *e* sounds aid naturally in sharping a tone, and the *a* sounds aid naturally in flatting a tone. Pupils in a whole class who sing certain intervals more and more incorrectly, the longer they sing with the unmeaning syllables loo or oo, are immediately brought back to the true interval by using the regular syllables. For instance, the diminished fifth, from fa to si, or 4 to 7 below, is sung more and more incorrectly with the insignificant syllables, but correctly at once with the significant syllables. This has been tried repeatedly with the pupils of many grades, and always with the same results. So the attempt to supersede a tried and certain means with an untried and uncertain means is of doubtful benefit. The singer who has no musical instrument to play needs them if the instrument player does not.

Some music teachers who learned to read music by playing an instrument are the strongest advocates of a piano in every class room. Having induced dependence by the use of the piano, they straightway make the dependence or inability of the children an excuse for the use of the piano.

In all lines of school work cases of "arrested development"

have been produced by improper methods, the very worst being the overloading of the memory with indigestible information. Teachers who have learned by experience that the stomach cannot be abused with impunity, evidently believe that the memory cannot be abused by crowding into it any amount of facts good enough in themselves. Because pupils do not writhe in pain or give any outward manifestation of mental dyspepsia caused by the imposition of mental food improper in kind and amount, that should not lead any teacher or director to decide that no harm has been done to their minds. Mental dyspepsia is shown often by a distaste for a study, which too frequently is ascribed to laziness, natural inaptitude, or erroneous ideas concerning studies.

To ignore interest and employ compulsion in physical exercises, for instance; to insist on an overwhelming number of motives, as in the present experimental method of teaching design; to overload the memory with songs only partly learned, as regards words and correct intonation, as in the present musical work in our lower grammar and primary grades, are recent instances of flagrant violations of pedagogical principles. This naturally results from a study of music or any other subject by itself without regard to the laws of mental growth. The main trouble with all school instruction is that teachers study subjects so much that they have no time to study children, children's minds, and the current of their lives.

Very often the girl taking lessons on the piano reaches a point where she makes no progress. She catches tunes very quickly; she uses her ears so much that it is easier for her to use them than her eyes. Unless the course of her work is very carefully watched she will rely entirely on her ears; and if her teacher is so unobservant as to play over her piece to give her the swing and soul of it, she will play it by ear, and refuse to read it as often as possible. The pupil will take the path of least resistance for the time being, and put up barriers to any greater proficiency. Many a girl has had to give up her musical instruction because her ear habits overcame her power to see and read music intelligently.

This exceedingly bad habit is fostered in the public school and the Sunday school. The public school is the greater

offender, because the teachers are expected to teach good habits, and to note any aberrancy at once. But the mischief lies in concentrating all the attention on the music and none on pupils' bad habits of work, perhaps induced by a special director. Neither the number in the class nor the lack of time, nor both together, are any excuse for not requiring pupils to use their eyes and reason.

A little girl in one of my first grades apparently could read her school reader through from beginning to end; but, paradoxical as it may seem, she could not read a word. Her ears were so exceedingly quick that she learned every story exactly by hearing other children read it. Each story had a picture at the beginning. She associated each picture with the story that belonged to it, showing that her sight and judgment were also excellent; but she took the wrong tack unnoticed by her teacher, who was better than the average. Her mother discovered that she could not read at all, but her excellent memory and association of ideas had blinded her teacher to the error of her ways. Then the work had to be done over with greater labor than would have sufficed in the beginning. That girl is a teacher now and is on her guard.

Pupils of her quick-eared kind range all the way from A to Z; and yet they are taught as if their memories and mental habits were exactly alike and needed no attention. At all events memories are crammed with songs, and ear service is required to such a degree that it is safe to say that the teachers see no possible danger in song cramming, that there is no danger in ear service to any extent.

The main difficulty with the choirs that I have had charge of was their inability to read music of a simple kind at sight. They frequently contained members with fine voices who did not know the few simple things required to start right; they required much drilling. Constant repetition of the tones on the organ enabled them to memorize the tunes or parts, because they could not use their eyes as effectively as their ears. That is the story I hear from most choir masters to-day, and the remedy seems to be sought in the public schools in more ear service and less eye service, more groping and less certainty, and more premature struggling for the fine flower of music

before the stalwart stalk has been raised. Hothouse processes produce only hothouse results. Stamina is wanting.

As to cultivating the voices of children in public schools the notion is Utopian. The children can be told to sing softly and to imitate certain tones given them, but that is not cultivating the voice in any permanent or telling way. Only a teacher thoroughly acquainted with the vocal apparatus can do that or should be permitted to do it. Many voices have been ruined by vocal teachers in this and every other city. To cultivate the voice properly individual instruction, suited to each case, and much vocal practice are indispensable. Two hours a day are needed to put the vocal organs in proper condition for proper singing, and then daily practice is necessary to keep the voice in good condition. To imagine that anything of much account can be done in cultivating the voice in one hour a week, besides attending to the rudiments of music and sight singing, in classes of fifty pupils each, is a pleasant dream that cannot be expected to materialize.

Besides, if considerable could be done in that line, the first natural shriek of a pupil at recess would undo a large amount of vocal practice of the singing sort. Professional singers are very careful of their voices and never shriek. The children have many opportunities during the week at play to use the natural voice in anything but the conventional singing style and they improve them, and should be permitted to do so as lively and healthy young people, vocal instruction to the contrary notwithstanding. There will be time enough for vocal work of a professional order when the changing voices are settled, when the few whose voices are worth cultivating are discovered. To do it before is premature; but that is a very common characteristic of the experimental work now in partial possession of the musical field of instruction.

The surprising thing about our musical instruction, as well as every other kind in charge of special teachers, is that it can be carried on without any supervision on the part of those who are supposed to understand the principles and application of psychology and pedagogy—supervisors, superintendents, directors, or whatever name they may bear.

Very rarely have I met a director of music, drawing, design-

ing, physical or manual training, or elementary science, who has made a special study of children themselves, or their dominant characteristics, for the purpose of getting the right point of view to start with, or a special study of pedagogy, psychology, and in short any of those subjects that tend strongly to ensure correct methods of instruction. How, then, can they, dealing mostly with the minute and systematic phases of their own extensive subjects, help going wrong in their instruction? It seems to be taken for granted that a specialist not only knows his subject thoroughly, but children, pedagogy, and psychology as well. This is the rock on which we split.

This, more than any other single thing, has impeded the progress of all the more modern and controversial subjects such as music, drawing, elementary science, physical exercise, and manual training. Everyone seems to be at sea in regard to applying pedagogical principles to those studies. If a teacher of any one of those subjects appears to understand it, there seems to be no question whatever about his ability to teach it correctly; and so he is left year after year absolutely with no supervision to try this and that experiment, and to err in this direction and that. This is the status of our musical instruction.

If there is anyone in authority who understands psychology and pedagogy and their practical application, he should see that they are applied in new subjects as well as in the old, in the subjects which he does not understand as well as in those which he does. They should be of universal application to warrant the attention given to them in college professorships, and, above all, for the best interests of school children.

In the report of the Conference on Music in Public Education, published in the Boston Transcript, March 16, 1904, are many interesting statements and claims, such as, "With the growth of a just and comprehensive idea of education, the claim of music to an equal place with other leading subjects in the secondary schools is becoming more general." "In this, as in other leading subjects, a teacher should have thorough knowledge of the subject taught; in addition thereto, an academic degree, or its equivalent in teaching experience."

This shows the estimation in which musicians hold music in a general scheme of education. The advocates of temperance

instruction, drawing, manual training, physical training, and perhaps science hold similar views about their own subjects. If they all had their way, what would become of the helpless pupils and their struggling teachers?

In none of their reports do I find much stress, if any at all, laid on pedagogical instruction, the right point of view, or any consideration of the physical and mental endurance of the common teachers and their pupils. Educational values, a just proportion of time and conditions for agreeable teaching and learning, are seldom even mentioned in their conferences, either through inadvertence, which seems hardly possible, or self-sufficiency. But music directors err no oftener than directors (expert?) of some other studies.

A just judge will not accept the smallest present from one who may possibly be brought before him for judgment. His personal likes must not influence his judgment.

Personally I have been deeply interested and actively engaged in music half a century; but that must not prevent me from rendering justice to every subject of school instruction that comes before me. I must remember that laws and customs have limited public school instruction to five hours a day, five days in a week, forty weeks, more or less, in a year; that a just amount of that time has been allotted to each study by those who have made a study of educational values and who may be called the supreme judicial court; that I must see to it that the many children entrusted to my care are protected in all their educational rights, for their own sakes, not for my personal benefit. So I must hold judicial views of the frequently intemperate advocacy, by special pleaders, of subjects studied from only one side, or from motives of personal interest.

The judicial courts have set a very instructive example in the frequent issuance of injunctions against attempts to violate business principles on the part of those who will look at only one side of a disputed question, mainly for selfish reasons. It is high time that the educational courts began to issue injunctions against continual violations of educational principles on the part of those who have studied only one side of the business of education, and that the side far more to their own personal advantage than to that of the great mass of the children under instruction in the elementary schools.

The Passing of the Spelling Book

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THE spelling book is no more; in schools conducted in accordance with advanced pedagogic methods it has disappeared, swallowed up, as it were, in the "glittering generality" named "English." Possibly in secluded hamlets yet uninvaded by the kindergarten principle of learning through play, where children still amuse themselves by games of their own choosing, blissfully unconscious of their loss in not being "directed" in their sports, possibly in such secluded nooks, along with an occasional well-sweep and a spinning-wheel owned by a mistress who knows which way to turn it, the spelling book may linger. But in our cities and in schools of modern methods the spelling book has vanished. You may seek in vain the lean, much-thumbed volume in the children's hands; in vain the spelling class of our fathers' day, standing in line toeing the familiar seam in the floor, hands behind the back, heads up, and brains and vocal organs alertly catching the ponderous words propounded by the teacher, and promptly returning them duly and accurately spelled and syllabified. That was an anxious hour for those too lazy to study the lesson or too dull to learn it, but a strenuous hour of mental athletics full of keen delight to those prepared for the fray, a proud time for him who could hold or win the place of glory "at the head of the class"; some in later life have mounted to the world's high places of honor with a feebler throb of joyous pride than once thrilled their hearts in district-school days when they "went to the head" of the spelling class.

You may seek in vain for the written spelling lesson by whose aid some of ourselves climbed the steps of the gentle art of orthography. Can any modern school display of crayon landscapes, water-color apples, or even trim sloyd boxes be so goodly a sight as those creamy, ivory-finished tablets of ours as they appeared at the end of the spelling class, containing their forty words of artfully combined letters all neatly written and not one

marked with the black cross of shame which meant wrong? Great was our humiliation at the appearance of these crosses, and great was it also over misspelled words in our compositions, which, while we were yet of tender age, we did not name themes or essays.

Imperfect spelling in those days was the mark of the dullard or ignoramus or the child of other ancestry than ours, whose fathers had never known the spelling book. To us, born from generations of pure-blooded New England foretathers, God-fearing men and themselves of the estate of the spelling book, the misspelling a word was a personal disgrace which was, moreover, an insult to our families.

Who of our generation does not remember the efforts of those of us who were the faithful to make the assurance of our knowledge doubly sure by dress rehearsal before the serious hour of the real struggle? the gathering about some philanthropic mate who would "spell" us, or the standing "in position" at our mother's knee while she rendered the same friendly service, or the passing the occasional examinations given by our fathers? They were inclined to try to puzzle us with such words as phthisic, Popocatapetl, and Nebuchadnezzar,—words which had small terror for us. They were bright and shining marks at which we had long trained our guns; but our teachers well knew the sly and treacherous words which were so elusive that aiming at one we were likely to hit another; those words containing an *i* before an *e* and those others seemingly of the same nature, but mysteriously disposing the *e* before the *i*, and those words which, to us, seemed to choose at their own sweet will whether or not their consonants, in the middle and at the end, should be single or doubled.

But the times have changed, and the spelling book belongs to the ascetic other days, when, as yet, the kindergarten had not risen above its place with young children, and working mightily leavened the whole lump with the principle of "mother plays" and the like. Spelling drill belongs to the simple, stern life of the past, together with other heroic practices, as sewing "over and over" and wood chopping, which, indeed, is still extant in the exercise of prime ministers and presidents who,

moreover, in their youth were braced by the discipline of the spelling book.

If you ask the children of to-day for the spelling book they will answer: "We don't have any; *she* keeps it on her desk."

"And how do you study your lessons?"

"We don't study any lessons; *she* just opens the book and asks us some words, and we spell them if we can."

"And if you cannot?"

"We write them over again."

There is no shame now in misspelling words. In the impersonal, upright, widely spreading handwriting which he who toddles may read, are wondrous variations upon dictionary English which never cease to amaze the instructor in secondary school or college, who has, nevertheless, had much and sad experience. There is no faintest blush of humiliation now on his cheek who sins against the laws of spelling, no pang of regret in his soul.

The teachers in the secondary school, however, feel the shame. They are of a former generation, and snatch golden moments from the all-too-brief algebra and geometry "periods" to struggle with a belated spelling lesson, containing hypothesis, corollary, parallel, and the like. The history and the classical teachers add something to the children's select and limited repertoire of words, and the English teacher, sometimes in schools where English does not remain the same glittering generality which it often is in the grammar school, and where children who cannot analyze a sentence or spell its words are required to write theses upon the philosophy of Wordsworth and the difference in the styles of Dryden and Shakespeare.

Passing through the secondary school the children do pick up stray bits of orthographic learning, but they are turned out no spellers, after all. By no chance lifts and on no "flowery beds of ease" can one be carried to the height of the art of spelling. College examiners bear witness to this as they speak of the astonishing errors in brilliant papers, and merchants who tell us of the rarity of a perfectly spelled letter among the many "in the handwriting of the applicant" sent by high school graduates seeking positions.

Yet, though the spelling book has passed, may we not hope for its return? In these years, when we are enthusiastically adopting many of the good old fashions, may not the fashion of the spelling book "come in" again?

The old designs of glass, plate, china, and furniture are popular; the dignified comfort of colonial architecture is appreciated; and the cheery blaze of the family fireside has become an essential, though it be no more than a gas log in the corner of the "drawing-room" of a toy suite; and, if we are not precisely returning to the religious and social ways of our forefathers, we are taking interest in these, as we show by our pleasant and perhaps profitable plays at being our own ancestors, which take the form of paring, husking, and quilting bees, colonial tea parties, and even spelling matches(!) in which comes often speedy discomfiture to those young persons who are so hardened or so humble as to place themselves in a position sure to bring swift chagrin; the prizes and the glory of these occasions fall generally to the elders whose school days were of the era when the spelling book yet reigned.

There are still those who honor and obey the spelling book and esteem the results of its training, who mourn the present unblushing defiance of its laws and regard misspelled words a blot on the scutcheon of culture and education. There are many not too stern parents who look with disfavor on some of the modern methods by which children are supposed to learn without knowing that they are learning and without knowing what they are learning, some suggest, who regard the results of these methods unsatisfactory and who ardently wish to see the spelling book and multiplication table reinstated in their former places of honor.

"There is much talk of children working too hard in school," said one mother; "my children do not have to work hard enough; sometimes, when they have an afternoon of games, story telling, or valentine making, I keep them at home and give them something to do which I think is of more importance for school hours."

"I was a little country girl," said another mother, "and my daughter is a college graduate and a teacher, but she cannot

begin to spell as well as I can; she often makes mistakes in her letters and she is constantly consulting me as a dictionary."

The present disregard of the spelling book has evidently touched the heart of the writer of a recent article in the Churchman. He is reviewing a series of "readers"; these are his words: "The children of the new pedagogy are listless in their attention, and require the constant stimulus of diversion. They have far less ability to read than the older generation, and a pathetic inability to spell. . . . The text in these books meanders through large pictures in long lines and short. By so much as the child is amused he fails to be instructed. These 'readers' are adapted to various modern methods of instruction [these are named]; if *only some 'reader' could be adapted to the spelling book method, we should get better results.*"

Does not this writer propose the one effectual remedy for the "pathetic inability to spell"? We know that the "inability" is not due to any weakness of the children's minds; they are no less able than their parents to learn and obey the laws of orthography; indeed, remembering the teachings of science in the doctrine of the survival of the fittest and evolution, and considering the children's intellectual achievements, we believe that the present generation can do greater things than its elders. We know that the "inability" is not the fault of the teachers, who are far better trained and educated than their predecessors, and at least as faithful and devoted to their profession. In their methods they are simply obedient to the new pedagogy, which places the spelling book on the teacher's desk instead of in the children's hands. Must not our hope for better things rest in the coming again of the spelling book to a recognized place in the course of study and the daily discipline of the schoolroom?

The spelling book does not readily lend itself to the modern method of learning made easy; it can hardly be wreathed with allurements in the shape of games or story telling; it is of another kind; it means work for permanent results, not for temporary recreation. There is about the spelling book a certain atmosphere of "plain living and high thinking," and of that stern morality which does right for right's sake.

The wise and thoughtful are warning us, in these days of the

republic, of the dangers of luxury, extravagance, and self-indulgence, and bidding us remember the downfall of Rome, and return in time to a simpler, sterner living. Might not the coming again of the spelling book, with its fine tonic air as of "freedom's northern breeze," blowing upon the languorous, tropical atmosphere which often pervades our schools, brace the systems of the children, and rouse them to vigorous action which would strengthen mental and moral nerves and sinews, and help make of us a hardy, enduring race of a fibre like that of the Fathers of the Republic?

Song of the Earth-born

A star amid the concourse of the stars,
Ringing its golden word into the rhyme
That syllables creation! Reel of Time—
Unwinding still thy spiral thread of light
Along the Past's deep night!
Where dost thou bear us in thine endless flight?
O voyager upon space's mighty sea,
Prisoned to one small ship, what word for thee?
What wonderful adventures shall the day
Reveal to thee, beyond the gleaming bars
Of constellations lying in thy way?
What glorious station
Telegraphs thy flying craft make no delay?
Millions of feet have left thy beaten roadway
For—where, O Earth?
Do spirits find an older, nobler nation
Through Death's new birth?
Before, behind us mystery assaileth.
No backward look, no prayer, no tear availeth—
Right onward to new deeps our strong ship saileth.
Unworthy son of Life—the soul that quaileth!

HELEN CARY CHADWICK.

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Education in Porto Rico

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"KNOWLEDGE is power." I prefer to say education is power. However, the truthfulness of that old proverb has never been successfully disputed. On the other hand, it follows that the lack of it is a mark of manifest weakness. For a practical application one has but to review the past four centuries of Porto Rican educational history.

If after four hundred years of organized government no code of laws establishing a common school system can be found, and but poorly equipped schools of any sort were in evidence, then it must of necessity follow that either the old proverb is incorrect or else the general population is illiterate to the last degree for one claiming for itself the honors of civilization. As a matter of fact, about eighty per cent of the Porto Rican population could neither read nor write at the time the island became a possession of the United States. Ignorance during all that period was of the densest description, except in the case of the favored few.

It is not with the spirit of ridicule that I write thus, but rather out of sympathy for the benighted masses whose opportunities have been so extremely limited. Since all history is to a greater or less degree but the natural sequence of cause and effect, let us note first the causes which have conspired, as time has been passing, to keep Porto Rico's educational status so very low; second, who the favored few were; and third, what is being accomplished since the American advent in 1898.

In the first place, the original population of the island was made up of Indians of a purely savage nature, to which unfortunate class were fastened the galling fetters of slavery, which resulted in greatly decimating their numbers. As time went on another product, commonly designated as half breeds, came into existence. These mixed breeds formed a contingent higher in the intellectual scale than the original Porto Rican Indian, but at the same time inferior to the Spaniards, by and with whom the cross had been formed.

About the middle of the eighteenth century negro slavery was introduced into the island by the Spanish, which has resulted in

another amalgamation of blood and the consequent production of another and practically distinct race of people, who for the lack of a better term are styled mulattoes. This constitutes the peon class, or those who were formerly slaves: With the passing centuries of tropical heat to enervate, and the bounteous hand of nature to provide, with very little effort, for the bare necessities, together with the oppression of Spanish task masters and extortionists, it is not the most difficult matter to conceive of what conditions might be expected to exist in the line of physical energy and moral and mental ideals among this people at the time of the American occupation.

The government up to that time may be said to have had practically no public school system. The main educational advantages which existed were of two kinds: The first and by far the most important were the parochial schools under the direction of the priesthood. In connection with these institutions there had been established from time to time libraries which likewise were strictly sectarian, and illy adapted to the masses. They were consequently little patronized in general, and have for the most part fallen into a state of decay, and at the present time represent little else than rubbish.

The only other means of encouraging educational tendencies was by the licensing of some needy person to conduct a sort of private school in his own home. This I presume was done more with the view of supplying such persons with the necessities of life than the furtherance of educational interests. In such cases very little interest was manifested by the teacher either in the pupils' needs or in his own professional qualifications. The only requisite was the permission or license granted by either the governor of the island or the alcaldia of the town in which the teacher lived or desired to teach.

There were, as I have previously stated, a favored few who were to a greater or less degree the representatives of the Spanish government, and as such were merciless in extorting from the subordinated classes as much treasure as possible, and neither were they always honorable in the means thus employed. It was the sons of such as these who had the opportunity to pursue their studies in European institutions of learning. I may add also that in nearly all instances such have been of pure Castilian

or Spanish descent, and had very little interest in the affairs of the island generally except wherein it was to their private interest. It is this class who to-day, with few exceptions, represent the best intelligence on the island, but who are most likely to curse the United States Government since the change has deprived them of government favoritism.

Such was the condition of affairs when the American government assumed control. Actuated by the true spirit of progress she is endeavoring to assist this prostrate people to a higher standard of living by establishing among other reforms a well-organized common school system. It is the aim as far as possible to have this accomplished by the people of Porto Rico themselves, Americanizing the whole work by having it directed by a Commissioner of Education appointed over the island by the President of the United States. It is evident that the Porto Rican people will evince more interest in all reforms if they are the product of their own labors.

The work thus far is giving evidence of success and constant advancement. Enthusiasm is manifested on all sides. Schools are being established in all parts of the island. While approximately 1,209 school buildings have been equipped and 62,000 children are at present receiving instruction, nearly 80 per cent of the children of school age have as yet not been reached, but the good work is going on.

Under the last year of Spanish rule there were but 539 schools, as statistics in the public records show. As to the precocity of the Porto Rican children, I have simply to say that it is all that can be expected, while the energy put forth by those who are old enough to know and realize the necessity of an education is more than gratifying. As concerning a class, the problem of school government is not a matter of as much anxiety as in some parts of the States. As a matter of fact, the Porto Rican boy or girl never forgets his manners.

Is it too much to believe that in due season we may see the educational standard of this little island sufficiently adequate to place it on an equal basis with any of the States of the Union,—a source of pride to the nation to which it belongs?

Its power for future usefulness lies in the education of its rising generation. Let us hope the best for its future.

Editorial

THROUGHOUT the land, especially in cities, there is great activity in the critical revision and re-organization of school courses. The new conclusions of psychology, the developments of sociology, and an awakening civic and economic interest, have brought about a public and professional alertness to the influences of education that is encouraging. What is it in education that makes it worth while to the average man, the small tradesman, the mechanic, the wage earner, the farmer, the clerk? What can the school do to make each a better citizen? And along with the question goes the conviction that what it can do, it should do. Do the changed conditions in civic life, within a generation even, make necessary important changes in the school training? The matter and sequence of school exercises are both in question.

PRIMARILY there is a new emphasis put upon "doing" as against mere knowing. This is not regarded as less important, but that, more. Not less honor is accorded to scholarship, rich and varied according to the age of the learner; a mind stored with ideas of truth, and pictures of beauty, and ideals of right and a comely life. But there is growing a feeling, if not yet a conviction, that there is no special virtue in the possession of knowledge. Men have been educated by what they have done, not by what they have known: or by what they have used of what they have known; by the life they have lived; by their struggle to reach their ideals; by their practice of maxims of behavior. There is, however, no special virtue in mere hand doing, manual training, and making things. The doing must be thoughtful and purposed. And the current revision of courses of study is recognizing this element. Drawing and manual training teachers are co-operating in a helpful way. Both are more generally regarded as means of expression, and not as independent branches of study. History and literature and science, geography especially, and customs and the industries, are made both more practical, more vital in their human relations because of this conception, and at the same time more educative.

THERE is also included in school exercises more first hand experience, and less of telling. The initiative is being found in the child. The teaching stimulates and furnishes opportunities for interest, and gives right direction; but the originating activity must be

with the pupil. What the child sees educates him, not what his teacher sees; what the child practices, or plans, or enjoys, or resists, not the teacher's doing, or planning, or enjoyment, or resistance. Merely telling is not often educative, either in the college or the elementary school. In both the work is becoming more real. The laboratory supplements the kindergarten and the elementary constructive exercises, as means of inducing personal interest and effort. Many school courses now provide for recognizing voluntary work in the lower classes corresponding with original investigation in the higher institutions. School gardens, and field excursions, and children's leagues, and pupil and student publications, and neighborhood observations of industries and customs, are, in many schools, east and west, north and south, taking the place of formal text-book and classroom lessons and lectures upon like subjects.

AS a third, and last, though by no means least important of the ideas underlying current movements for readjusting school courses, should be mentioned the disposition to exalt the fixing of conduct, and the less exclusive sharpening of the understanding. The occasional or frequent efforts in recent years, and the recent attempt in New York State, to introduce some positively effective plan for affording moral guidance, have resulted in little direct good. But in an indirect way, schools have been influenced to respect the finer moral atmosphere, and the value of a habit of right behavior, and the importance of having in the school teacher a safe and elevating moral influence that is a distinct gain. Discipline by the teacher has been immensely softened and deportment of pupils correspondingly improved. Instances of severity by the former, and of rowdyism by the latter, are relatively few, and generally condemned. In the aggregate, the spirit of the school is distinctly ethical, despite the occasional lapses. The attempt to substitute wisdom for mere knowledge is often crude, and the results are often meager; but there is the attempt, and the movement through teachers, and their co-operation with parents in education and other lay societies, is very encouraging.

A SUCCESSFUL merchant and large dealer in hardware was asked, "What are the qualities that make a successful salesman for your goods?" He replied: "(1) Knowledge of the goods, (2) a real interest in the man who buys, (3) an unfailing good nature, and (4) absolute truth and honesty." The schools have long emphasized the first, in the teacher,— a precise and comprehensive acquaintance with this culture, this initiative and interest in the best things, with

which the pupil is to be endowed. Current educational theory, and, in a measure, educational practice, have exalted the importance of the other three qualities,— a real interest in the child, unfailing kindliness and fairness, and absolute truth and honesty in dealing with the young. Something of improvement may be seen in the school prescriptions; more, in the qualities of mind and heart demanded of the teacher.

WE have previously set forth in this department of EDUCATION the fundamental importance of LOVE, and of AUTHORITY, in the relations of parents to children in the ideal home. We now name SYMPATHY as a third fundamental. By sympathy we mean something quite different from love, though love is beneath it as its ground and source. Love is the great, abiding, all-pervading sentiment of the parental mind, wherein the child finds the very reason of his existence and which is pledged by a Divine law to care for him in all his needs until he himself becomes finally an independent, adult being. By sympathy we mean the particular manifestation of the parents' love which enables the mother or the father to take the child's point of view and see things as the child sees them. This is essential to the highest ideal of home life. For only thus can the best solution be found of many perplexing problems and the most favorable conditions furnished for the child's symmetrical development. Sympathy, as here defined, is one of the best proofs of real love; and it will greatly modify and finally dispense with the exercise of authority in the home. It will guide the child in right directions and help him in acquiring an ability to form true, independent judgments. It will save parents from grave mistakes into which too many easily fall. It will greatly simplify and strengthen the relations of parents and their children and improve the social and moral atmosphere of the home. Let us note two or three illustrative examples.

A very young child has a lot of undeveloped nerves and muscles. It is necessary for him to develop and get control of them by almost incessant exercise and effort. It is essential to his physical, not to say moral, welfare that he shall tumble about a good deal in the dirt, wriggle, run, jump and roll in a way quite shocking to sober, dignified adult nerves and notions. But the wise mother takes the child's point of view and provides properly for these requirements of infantile humanity. She is not so cruel as to require him to sit still and always be perfectly clean. As time goes on other necessities assert themselves. The infant turns into a lusty boy and craves companion-

ship with other boys. Every normal child needs comrades of his own age, for which adult associates are no substitute. Some parents make a great mistake here. They require their child to stay at home and do not allow him to mingle with other boys and girls for fear of various contaminating influences. The result is an abnormal, old-fashioned, bashful, awkward or weak and effeminate youth, who feels throughout his whole lifetime the handicap of his unwise bringing up. Again, there comes a time in a young person's life when he begins to feel the attraction of those of opposite sex. In this critical time, so fraught with possibilities of good or evil, how important, how indispensable is a little genuine, tactful, loving parental sympathy! How unfortunate it is that there are so many boys and girls who will go to almost anyone rather than to their father or mother for sympathy and advice in such a time! In the minor questions of daily conduct, and in the larger matters affecting life-conditions and perhaps eternal destinies, there is a call in the home for the constant exercise of this rare and beautiful quality of human sympathy,—the power to put one's self in another's place. Its cultivation in the parental relation will lead to its exercise in the wider spheres of social and civic life. To be a good father or mother is almost equivalent to being a good neighbor and a good citizen. Nothing will contribute more to make home happy than this sympathetic, thoughtful, unselfish attitude of the older toward the younger members of the family circle. And such an educative force in the home will develop a sense of responsibility, a facility in forming judgments, and an all-round manliness that will prepare the youth of such homes in their turn for high-grade citizenship. Therefore we name sympathy in the catalogue of fundamentals of a true, ideal home life.

Foreign Notes

INDUSTRIAL EDUCATION IN EUROPE

PRINCIPAL ARTHUR MARVIN, SCHENECTADY, N. Y.

All the phases of education that have been developed through the experience and thought of the race may be reduced to two main types—the culture, or humane type, and the industrial, or professional type. In the United States the former type has engaged the attention of educators up to the present time, almost to the exclusion of the latter, although there are a few schools in this country which may be classed as industrial. In Europe, on the other hand, industrial education has been developed to a marked degree.

Technical education in Italy during the last few years has made rapid and praiseworthy progress. In 1880 the government appointed a commission to study thoroughly this question. Its report was to the effect that Italy's future as a manufacturing country depended upon the skill and intelligence of her working classes, and that nothing could more effectively further the interests of the country in a national sense, or raise the general condition of the people, than a broad and liberal support of industrial education on the part of the State. At the present time a system of industrial schools extends all over that country.

Industrial schools in Holland educate skillful and practical workmen for the different trades. Instruction is divided into three departments—elementary, theoretical, and practical. In the elementary department instruction is given in reading, writing, arithmetic, history of the Netherlands, and geography. The workshops of some of these schools have been developed to such an extent that in the metal working branch, for instance, engines driven by steam and electricity have been set up wherever practicable. The school authorities are permitted by the State to purchase the necessary wood, iron, steel, nails, stone, copper, metals, colors, coal, glass, etc., for the use of the students. A great many tools for the hand trades are manufactured every year.

Much has been done for technical education in Russia. Technical schools with advanced curricula have been founded

in Moscow, St. Petersburg, Riga, and in other cities of the empire. Instruction in this class of schools is thorough, and in no country, with the exception of Holland and Germany, is the system of practical demonstration better developed than in Russia. The schools, for the most part, are connected with large factories, where the student receives wages for the work actually performed, the same as a common laborer. During the hours devoted to such practical instruction, the student assists in manufacturing motors, pumps, boilers, tools, etc. In many factories it is the custom to permit the student to act temporarily as foreman or manager of some department after he has passed through the prescribed course of theoretical and practical training.

Industrial education in Sweden and Norway is chiefly connected with the public school system, and there is scarcely a town, large or small, which is not supplied in this respect. In many of the country districts evening classes have been arranged for the purpose of giving instruction to young men and women in sewing, spinning, and weaving. In a number of cities elementary technical schools have been founded, which prepare students to enter the royal technical institutes in Stockholm and Gothenburg. The elementary school in Boras is intended especially for weavers, and has a workshop fitted up for practical instruction. The evening preparatory school in Eskilstuna trains young men to work with iron and steel, while those in Filipstad and Falun are preparatory schools of mining.

There are in Austria between four hundred and five hundred industrial schools of all classes and grades. Numerous special schools for weaving, wood carving, basketry, and for practical instruction in making firearms, machinery, glass, watches, clocks, etc., have also been established. Technical education in Austria may be divided into six classes, as follows: (1) The technical university; (2) State industrial trade schools; (3) industrial art schools; (4) special industrial schools, with workshops; (5) primary industrial school classes, where instruction is given evenings and on Sunday; (6) technical trade museums, in connection with which instruction is given.

The hours devoted to practical and theoretical instruction in the industrial weaving schools of Switzerland usually number

ten each day. During the forenoon, from seven o'clock until twelve o'clock, the pupil is taught how to sort, prepare, thread, mount, and weave. During the afternoon, from two o'clock until seven o'clock, the theory of weaving is taught in detail. For practical instruction many of the schools are supplied with hand weaving machines, while a number of the most important ones have mechanical machinery. The courses of instruction are divided into two parts, theoretical and practical, each course lasting six months. During this time the students manufacture large quantities of handkerchiefs, napkins, and ordinary cloth. During the latter part of the course they are thoroughly instructed in the art of weaving damask, ordinary piqué or double piqué. The pupils in every case are so grounded in the technicalities of weaving that they step from the school to the factory, and from the spindles of the factory there is nothing to prevent those gifted with exceptional skill from rising to positions of managers.

Technical education has been the subject of much attention in France. In addition to the technical universities and technical schools for roads, bridges, mines, and civil engineers, there are industrial art and trade schools for textiles, tobacco, powder, clocks, gloves, porcelain, and every other article of manufacture in France which has claims to any importance. There are many industrial schools in France which are worthy of special attention. This is true of the one in Cluses, Savoy, which was established in 1863 for the clock and watch industry. It admits pupils between the ages of fourteen and twenty, but every candidate must have a good elementary education. The aim of the school is to train practical workmen for the watch and clock industry of that district. There is also an advanced course for those who wish to become manufacturers in this branch.

These foreign examples must have significance for us. We are richer in natural resources than any of them, but we have not kept pace with other countries in fostering our home industries. We have imported the articles of taste and luxury and imported the skilled laborers, relying on our vast product of raw material to give us the balance of trade; and so it has. Education is a means to an end, and only as a means to an end does it pertain to the State. Let the State see to it that the right kind of education is provided for its great army of workers; let the State suppress idleness as it does ignorance; let it provide trade schools rather than workhouses and prisons, and this country will make such advances in the arts and sciences, such strides toward a higher order of material prosperity, as some of us have never dreamed of.

Book Notices

NOTE.—The number of books now published monthly is so large that we shall hereafter adopt the plan of promptly acknowledging by title, author, publisher (and price when we have it) all books sent us for review; and later, as space is available, give more extended notice to such as seem most likely to be of interest and value to our readers.—PUBLISHERS EDUCATION.

Symbol-Psychology. By Rev. Adolph Roeder. Harper & Brothers, New York. This grand book marks the beginning of a new epoch in Christian thought. It shows that the historic legend, fairy tale, and myth are phases of the story of the human soul, which in the Bible we have entire. Romulus and Remus, Castor and Pollux, Cain and Abel are the struggle between the higher and the lower in one's nature. The Neibelungen Ring, the Holy Grail, the Ark of the Covenant, and other life tokens, are the divine at the center of our being, guarded vigilantly from harm, and sought for by the soul in its struggle upward and finally possessed. And similarly others have their inner meanings. The unity of the race is remarkably set forth here, in the revealing that all ages and peoples have always been in possession of some form of the fundamental truths.

Talks to Students on the Art of Study. By Frank Cramer. This is a sensible contribution to the psychology and philosophy of the art of study by one who has made a deep inquiry into the realms of the subject and thought soberly and honestly. There is no claim to originality in the setting forth of the themes, but there is much in the matter and manner that is essentially the author's. To the student it will prove to be a substantial benefit if he will read the book with receptive mind and take its suggestions in the spirit they are given. San Francisco: The Hoffman-Edwards Company.

Masterpieces of Latin Literature. Edited by Gordon Jennings Laing. This is another of the famous masterpieces series issued by the publishers, volumes that are most valuable to possess, being whole libraries in themselves. The present number contains masterpieces from Terence, Lucretius, Catullus, Virgil, Horace, Tibullus, Propertius, Ovid, Petronius, Martial, Juvenal, Cicero, Livy, Cæsar, Tacitus, Pliny and Apuleius. To each author is added an extentive biographical sketch, and abundant notes serve to illuminate the text. It is a most handy book, of greatest worth to the scholar and to the general reader; every school should have copies of it for reference and supplementary reading. Houghton, Mifflin & Co.

A Geography of Commerce. By John N. Tilden and Albert Clarke. Not an illustration dots the pages of this work; the authors holding that pictures, to make a book look pretty, are wholly out of place in a geography of commerce. And they are right; the study is of too serious importance, the students pursuing it are too mature to require illuminating cuts, by which the text is made attractive and informing. The authors have attacked their subject with judicial calmness and all fair-mindedness, and have made a work that is substantial and wholesome, replete with information on all commercial conditions and satisfying every demand that the schools may make. It is a book of facts; but these are so presented that the student has but to attempt to learn from it to discover whatever he may need to know in an academic sense. Fullest information on all points have been obtained from the great financial centers of the world; the

latest maps have been inserted, the most authoritative tables included, the latest statistics furnished. The maps are striking features of the book, being new and of a character to afford succinct information on industrial and commercial facts. The study of commerce in the schools will take on new power with this book to aid the student and teacher in its prosecution. Benj. H. Sanborn & Co.

Outline of a Year's Work in the Kindergarten. Arranged by Anna W. Devereaux. Miss Devereaux is the Supervisor of Kindergartens in Lowell, Mass., and a practical teacher. The outline is based upon the order of the seasons, and in this the Mother Plays hold an important place, being woven into and adapted to the changes which surround the child and appeal to him. For the two divisions of the kindergarten the gifts and occupations are most carefully explained and worked out and arranged for every day of every week in the school year. It is thus the most practical and helpful of handbooks for kindergartners, a fact most apparent when it is noted that this is the third edition of the Outlines. We do not see how any kindergartner can be without this most serviceable book. Boston: J. L. Hammett Company.

Famous Assassinations of History. From Philip of Macedon, 336 B. C. to Alexander of Servia, A. D., 1903. By Francis Johnson. The subject of this book is not a pleasant one, nor is it an honor to humanity that the facts related in the book are facts; but since they do exist they are legitimate materials of history. This volume gives a careful and apparently accurate and impartial account of these great crimes. Each chapter is illustrated with a portrait of the unfortunate victims. A. C. McClurg & Co.

The Romance of the Civil War. By Albert Bushnell Hart. This is the fourth volume in the series of Source Readers in American History, a series of greatest interest and importance to every student and teacher of United States History. Within the compass of four hundred pages are given stories and poems relating to the events of the Civil War, ranging from descriptive pieces of life before the war in the South to thrilling selections of field and camp and deck. The selections have been made with wisest care, and they furnish what the student so often needs to make his history comprehensible and graphic. The charge is often made by students that our history is colorless compared with that of the English; Professor Hart's book will serve to dispel this accusation. The book will be a most valuable adjunct to the teacher of American history, and should be on every teacher's desk. The Macmillan Company.

Some Latin Books. *Latin Grammar*, by William Gardner Hale and Carl Darling Buck, is the work of specialists, the authors being professors in the University of Chicago. Their book embodies the results of many years of independent study, and presents the facts of the Latin language in their true relations to one another. The field covered by the book is the syntax actually found in high school Latin, all matters that do not occur in high school Latin, or that are rare in the Latin ordinarily read in colleges, having been studiously omitted. Infinite care has been taken to present the true historical development of the language in a way that will best appeal to the intelligence of the young student, that will be most helpful to his memory, and that will give him a sound foundation for possible further study. It is a scholarly work of finest style and clearest expression, and its publication marks a decided epoch in the study of Latin. Ginn & Co. *A First Latin Book*, by Clifford Herschel Moore, of Harvard Uni-

versity, is intended to provide the necessary preparation for the reading of Nepos and Cæsar. To this end eight hundred and fifty words most frequent in Cæsar's Gallic War and Nepos' Lives have been selected to form the main vocabulary of the book; and each word has been used eight times or more in the sentences for translation. The method employed is the one most attractive to the beginner of Latin; he is led by easy steps from the simple and natural order to the involved, and comes out from the study with a large working vocabulary and a power to read Latin that will be his possession for life. The book is an excellent preparatory one for the substantial study in the college course. D. Appleton & Co. *The Tusculan Disputations*, edited by Frank Ernest Rockwood, contains the first book of Cicero's famous work, and the Dream of Scipio. The editor has given a most learned introduction to the disputation; his study of the philosophy of Cicero being a thorough exposition of the subject. The notes are comprehensive and exhaustive. Ginn & Co. *Latin Prose Composition*, by Henry Carr Pearson, is an attempt to combine a thorough and systematic study of the essentials of Latin syntax with abundant practice in translating English into Latin, and to afford constant practice in writing Latin at sight. Most of the English sentences are based on Cæsar's Gallic War, Cicero's Catiline, and Pompey's Military Command. The sentences are carefully graded, with many exercises for general review preparatory to college entrance examinations. It is a thoroughly well made work, and bears the marks of the schoolroom on every page. It will serve well because it has served well. American Book Company. *Cicero De Senectute*, edited by Frank Gardner Moore, is a fine, discriminating edition of Cicero's most famous philosophical essay. The introduction is written with fullest appreciation of the subject, the notes are learned but entirely for the guidance of the student, and therefore within his comprehension and suited to his immediate use. A novel feature is the insertion of Pope Leo XIII's hexameters on "Frugality and the Viridis Senectus," eighty-five lines in all. These fine Latin verses were written by His Holiness in 1897, and were received with marked favor by all scholars. American Book Company. *Sallust's Catiline*, edited by Alfred Gudeman, is marked by two special features: the removal from the notes of all references to grammars and the placing of these references under separate headings in the introduction; a special vocabulary constructed in such a way that the meaning of every word or phrase is given with its appropriate rendering in the order of its occurrence in the text. The introduction is short but lucid, and adapted to the age of the student of Sallust; the notes are full and clear and altogether suggestive. D. Appleton & Co.

A Synoptic Text-Book of Zoology for Colleges and Schools. By Arthur Wisswald Weysse, A.M., Ph.D. (Harvard). Text-books on zoology are very apt to be either too inclusive and abstruse, or on the other hand superficial and inaccurate. This comes about from the fact that authors of such books address themselves either to specialists in some one of the zoological branches, or else attempt to make books which are adapted to beginners, and in the effort to be simple and untechnical fail to bring out the relations of the subject to the broader problems of biology. The present book is an attempt to avoid both these dangers. In a large and handsome volume of five hundred and forty-five pages very fully indexed, classified, and illustrated, the whole subject of zoology is presented to the student. We believe that no other book exists which so con-

clusively meets the requirements of both the beginner and the advanced student of the science. The first portion of the volume briefly defines zoology, treats of the phenomena of life in general, shows the relation of protoplasm of the cell, the cell to the tissue, the tissue to the organ, and the organ to the individual, besides giving the fundamental principles of classification. The second portion of the book gives a description of the various animal types. The third portion of the book reviews the general principles of zoology, including the distribution of animals, and an explanation of their habits. The laboratory method and field work are fully provided for. There is something of German thoroughness about the author's work, and we can hardly see how anything further in the line of a text-book on this subject should be needed until the science shall have made substantial advances. The Macmillan Company. Price, $4.

A History of American Literature. By William P. Trent. This is a scholarly work on our American writers prepared by one who is already recognized as an authority in the field of letters. Dr. Trent has contributed much to the cause of American letters, and his critical essays have received the recognition they have so richly deserved. In his latest work he has made all readers and students his debtor, a reading of his book rendering the obligation a substantial and pleasing one. We have not space beyond merely to call attention to the great value of the book and to commend it to all students of American literature. D. Appleton & Co.

A Latin Grammar. By George M. Lane. This stupendous work by the lamented Dr. Lane has been thoroughly revised by its editor, Professor Morgan, who has given to it the benefit of his profound scholarship and extensive experience in teaching. We reviewed the work on its initial appearance, according it unqualified praise. It has taken its place as the finest product of American scholarship in Latin and is recognized as the authority on all matters relating to the Latin language and grammar. Dr. Morgan's changes have not been many nor radical but sufficient to remove all errors incident to the first edition, and to add some features, particularly the section relating to Sound. This has been extended from nineteen to thirty-one pages, The book is now a monument of highest scholarship and learning, a work to which all students must go for exhaustive treatment of the grammar of the Latin language. American Book Company.

Agriculture for Beginners. By Burkett, Stevens and Hill. This little book is published primarily for the use of pupils in country schools and is intended to give them the rudiments of agriculture in the same way they learn the truths of geography or grammar. It deals with the following topics: the soil and its preparation for planting; the soil and the plant; the plant and its diseases; how to raise a fruit tree, grafting, etc.; orchard, garden and field insects; farm crops, cotton, wheat, corn, tobacco, etc.; domestic animals,—horses, cattle, sheep, swine, poultry; farm dairying, country roads, etc. The authors have discussed these topics in a brief but clear way. The book is full of valuable information. Children from the farm who study it will not only be directly benefited but will have their eyes opened to a hundred facts of nature that otherwise they would not see. So clear and practical are the chapters that it will not only be of use for country children but will be of value also to students of the

new Science of Commerce, generally called Commercial Geography, in the city, as well, and ought to be on the desk of each teacher for reference, as it explains clearly many points of information which cannot otherwise easily be obtained. It would be a pleasure to examine the book if only its form were considered and the excellence of the paper and printing. The illustrations also are very beautiful. In fact we have rarely seen a school book which had so many good illustrations as this book. It is worthy of a wide sale. Ginn & Co.

Elements of Political Economy. By J. Shield Nicholson. Dr. Nicholson is professor of political economy in the University of Edinburgh, and has previously issued his study of political economy in three large volumes in which he gives the substance of his lectures before his students. In his elements he reduces his larger work into one compact volume, designedly making it a book for the use of students and for general readers who have not the time or ability to take on the study of the larger work. In the smaller work the leading principles are stated without the introduction of controversial matter, the needs of the student being considered with the discussion of every subject. In clearness of definition, lucidity of style and candor of statement, Dr. Nicholson is a master. He goes right to the heart of every subject and treats it succinctly and evenly, his thought being extremely clear cut and unambiguous. It is a strong, wholesome text-book and deserves widest study and reading. Macmillan Company.

Modern English Prose. Selected and edited by George Rice Carpenter and William Tenney Brewster. The object of the editors of this convenient compendium has been to include in it as much as possible of illustrative material for classes in rhetoric and English composition. The selections are nearly complete and unabridged, and the book contains a rich store of essays, stories, and chapters, or other essential parts, of larger works. One can find in it all the various forms of composition. Rhetoric classes in our secondary schools will find it interesting and useful. The Macmillan Company. Price, $1.10.

Business Methods. By William P. Teller and Henry E. Brown. The authors are well qualified for the making of a book in business methods, Mr. Teller being the credit man of a large concern, and Mr. Brown the head of a commercial department in a high school. Their book aims to provide a body of practical information pertaining to business matters, in a form sufficiently simple for use in the upper grammar and high school grades. The subjects treated of are, letter writing, bills, invoices, banking, notes, drafts, money orders, petitions, express business, contracts, leases, stocks and bonds, partnerships, insurance, deeds, mortgages, wills, etc. It is a book of practical knowledge, not a bookkeeping treatise. It includes only those facts which everyone should know, and it gives these in a most graphic and practical manner. It is a thoroughly usable and handy book for school use and will find recognition and prompt use wherever bookkeeping is taught. Rand, McNally & Co.

Recent European History. By George Emory Fellows. Dr. Fellows is the president of the University of Maine, an able teacher and well known for his superb work as professor of history in the University of Chicago. The time comprised in his book is from 1789 to 1900, a period which few text-books

touch upon, but one most interesting and important to students. Secondary schools offer very little history subsequent to the French Revolution, the nineteenth century being reserved for the study of upper classes in college or for graduate work. But as only a small fraction of students ever have the opportunity of studying this period, Dr. Fellows' book supplies a distinct deficiency. It is a work of striking power, written in a style that is most attractive and engaging, and packed with timely and necessary information. Benj. H. Sanborn & Co.

Shorter Poems of Goethe and Schiller. Selected and arranged by W. H. van der Smissen. The poems selected are arranged in chronological order, thus lending an additional interest to the individual poems and to the collection as a whole. To each poem is a commentary giving an interesting bit of information relative to the verse and the occasion of its writing; the notes are on the same page with the poems and are explanatory rather than exegetical. A well written introduction serves to illuminate the lives of the two greatest poets of Germany; a dozen full page illustrations embellish the collection and add to its value. D. Appleton & Co.

Physiologies: Elementary Physiology and Hygiene. By H. W. Conn. Dr. Conn is professor of biology in Wesleyan University, and eminently qualified to write a text-book that shall be scientific and teachable and interesting. Practical helpfulness is the keynote of his book, which is at once comprehensive in its treatment of the subject, and elementary enough for the upper grammar and lower high school grades. The treatment of the subject of hygiene from the strictly scientific standpoint is most valuable, and the information the student will absorb will prove of exceeding worth. The chapter on health and disease is one of the most practical we have seen in a text-book of this character; the discussion of contagious and other germ diseases is sane and pertinent. It is a stimulating, sensible, practical, wise text-book on physiology. Silver, Burdett & Co.

First Book in Hygiene. By William O. Krohn. This is a primer on physiology, and is written with a view to interest young persons in the study of the human body. The author does not attempt to give fullest facts relating to the subject, but to invite attention by talking tactfully on the topics that are most attractive to young folks, and by presenting the facts thereof in a manner to enlist interest and suggest further reading and study. It is a most satisfying primer; its use will serve to awaken a desire in the child to live the best life possible. D. Appleton & Co.

Physiology Primer. By O. P. Cornman and Oscar Gerson, principals of schools in Philadelphia. This is not so interesting a book as the one noticed above; it seeks to set forth in rather bald manner the rigid facts of physiology and anatomy, making it a book to precede the more formal study in the higher grades. If it is thus intended by the authors it may serve a definite purpose, but as a first book in the subject it is too difficult and too skeletony. Eldredge & Brother.

The Louisiana Purchase, and The Exploration, History and Building of the West. By Ripley Hitchcock. In connection with the St. Louis Exposition quite a literature has sprung up, manifesting the popular interest, and

serving as a means for the dissemination of knowledge in regard to a very interesting chapter in the history of the United States. The present volume covers the subject very thoroughly. Chapter first gives an account of the Spanish Discoveries; chapter second of the French in Louisiana, followed by other chapters on the French in the Eighteenth Century; The American Westward Movement; Louisiana's Critical Period; Louisiana an Active Issue; The Purchase Arranged; Transfer to the United States, etc. Part II concerns itself with the Lewis and Clark Expedition; Part III with the Exploration of the West; and Part IV with the Building of the West. There is a large list of illustrations and maps which add materially to the value and interest of the book. Ginn & Co.

Arithmetics: An Introductory Arithmetic, by David M. Sensenig and Robert F. Anderson, is the first in a series of three books in arithmetic planned by these teachers of mathematics in the West Chester (Penn.) Normal School. The plan of the series as demonstrated in this first book is to lead the pupils by inductive methods to the fundamental conceptions of every subject; to this end the work is most carefully graded, the subjects being developed by natural steps. There is an abundance of problems, and these are so worded as to hold the pupil within his own experience. Silver, Burdett & Co.

Elements of Arithmetic. By John W. Hopkins, superintendent of Galveston schools, and P. H. Underwood. This is an ambitious work of more than five hundred pages, in which the authors endeavor to give all that is necessary for the free study of arithmetic in the schools. They omit no subject usually contained in arithmetic text-books, and they elaborate each subject to the satisfying point of the most exacting of teachers. There is no departure from the established order of presentation of subjects, but there is a wonderful array of problems which the authors claim to be new. It seems to be a thoroughly safe and strong book, and with its wealth of problems will unquestionably find hearty acceptance with teachers. The Macmillan Company.

The Primary Public School Arithmetic. By J. A. McLellan and A. F. Ames. This is strictly introductory to the Public School Arithmetic, and forms with it a complete course which is based on McLellan's and Dewey's Psychology of Number, and has been received with approbation in many schools. Macmillan Company.

Mental Arithmetic, by Hopkins and Underwood, is an admirably arranged little work for quick solving of problems without pencil and paper. The problems are judiciously graded and are interesting and sensible. Conundrums have been thrown out and puzzles have found no lodgment in its pages. The Socratic method of development has been followed in every subject. It is an excellent mental arithmetic. Macmillan Company.

Stories of the Ancient Greeks. By Charles D. Shaw. Ginn & Co. This book is a collection of all the principal Mythological and Historical Greek Stories. As delightful reading for the young, and as a ready book of reference for adults where only the general character of god or hero is required, it will be a valuable member of the household. Some features of it, of not little importance are: its pronouncing vocabulary, containing every proper name used in the book; the Greek and Latin names, side by side, of gods and goddesses; and a

map of Greece, with coasts and islands of the Ægean sea. The illustrations are artistic and well chosen.

The Young Marooners. By F. R. Goulding. Edited and adapted for school reading. Standard Literature Series. This is a good story, founded on fact, of some children who drifted off in a boat from the coast of Florida to an island, where they lived alone for weeks. It is a revision of an old story, its first appearance having been made in 1852. It is excellent for teaching the young the possibilities inherent in human ingenuity. It is bad for them in depicting the children as looking with calmness and indifference upon dead animals, and even the dead body of a human being. This is not true life among civilized children, and its portrayal as such or the implication of it as anything to be desired is unfortunate in a book admirable, in all other ways, for childhood's reading. University Publishing Company.

A Selection from the Best English Essays. By Sherwin Cody. Dr. Cody's critical and historical introductions to the essays are the most striking feature of his little collection. The essays selected are well known and have served to illustrate the history of English prose style; the clever criticisms which the editor makes on them and their authors render the book mightily attractive and delightful reading. The general introduction is simply delicious and worthy a separate issuance. A. C. McClurg & Co.

A Short History of England. By Katherine Coman and Elizabeth Kendall. This is a most excellent history of England, told in simple, direct form. The personal element dominates, rendering the story of the English people doubly interesting to the young student for whom this book is primarily intended. The little side lights of anecdote and detail add greatly to the power to hold the interest of the student and detract in no manner from the value of the information. The illustrations, the maps, and the arrangement of the subject matter all conspire to make a very serviceable and excellent text-book for school use and reading book for general use. Macmillan Company.

Beginner's French. By Victor E. Francois. Against the old method of teaching a modern language through the eye only, the new method aims to train the ear, the tongue, and the eye, and to this end has Dr. Francois prepared his book of fifty lessons. Conversation begins at the very first lesson and continues to the very last. The lessons are easily progressive, methodically arranged, and within the experience of the young students for whom it is designed. It seems to be a very practical and usable work. American Book Company.

Physical Laboratory Manual. By H. N. Chute. This is the revised edition of a well known manual that has enjoyed a substantial repute in physics classes. In this new edition additional problems under Mechanics, Light, and Electricity have been included, to meet the demands of those colleges which specify certain problems in their entrance requirements. Coincident with these new problems are added more complete directions for experiments, new and improved forms of apparatus, many new illustrations, and three new tables, to wit, electrical carrying capacity of wire other than copper, four-place table of logarithms, and conversion table for changing from one set of units to another. The manual is now thoroughly up to date and is a most satisfactory and usable book for the physical laboratory. D. C. Heath & Co.

We have received the following books for review in EDUCATION:—

American Book Company: Steps in English, Books I. and II. By John Morrow, M.S., A. C. McLean, A.M., and Thos. C. Blaisdell, A.M. Spelling by Grades:—The Words in Baldwin's Readers. Carpenter's Geographical Reader: Australia, Our Colonies, and Other Islands of the Sea. The New Century History of the United States. By Edward Eggleston.

The Macmillan Company: Old-Time Schools and School-Books; by Clifton Johnson. A Hundred Years of Warfare, 1689-1789: or How the Nation Was Born; by Marguerite Stockman Dickson.

Ginn & Co.: Youth's Companion Series: Industries of To-day; edited by M. A. L. Lane. Notebook to accompany Bergen's Text-Books of Botany; by Joseph Z. Bergen.

Little, Brown & Co.: The Wood-Carver of 'Lympus. By M. E. Waller.

D. Appleton & Co.: College Training and the Business Man. By Charles F. Thwing, LL.D.

D. C. Heath & Co.: Modern Language Series: Corneille's Horace; edited with Introduction and Notes by John E. Matzke, Ph.D.

Paul Elder & Co.: Fairy Tales up to Now; by Wallace Irwin. Price, flexible cover, 25 cents. Matrix edition, 50 cents.

P. Blakiston's Son & Co.: Physical Education by Muscular Exercise; by Luther Halsey Gulick, M. D.

The Annual Catalogue of Purdue University, La Fayette, Ind., 1903–1904. Catalogue of Ohio University, Athens, Ohio, 1903–1904, and Circular of Information for 1904–1905. Research in State Universities; by Israel C. Russell; published by The University of Michigan. Report of Andover, Mass., School Committee for 1903.

American Book Company: Der Trompeter von Sakkingen, by Scheffel, edited by Valentin Buehner; Kinder-und Hausmarchen, by Grimm, edited by B. J. Vos; Bunte Geschichten, by Stoltze; Aus dem Deutschen Dichterwald, edited by J. H. Dillard; Colomba, by Merimee, edited by H. P. Williamson; Les Trois Mousquetaires, by Dumas, edited by C. Fontaine; and Mlle. de la Seigliere, by Sandeau, edited by E. M. White. Each of these books contains an excellent introduction, coplous notes and a special vocabulary. Among texts of modern languages these books are superior because of their excellence of type, handiness of size, accuracy of notes and scholarly judgment; they are ideal books.

Periodical Notes

Dr. J. M. Rice, in the April-June *Forum*, uses his recent investigations in educational matters to enforce "The Need of a New Basis in Supervision."—Harold Bolce sends from Japan, for the May number of the *Book Lover's Magazine*, a thoughtful discussion of the problems that will ensue "If Japan Should Win"—the third of his notable series of articles on "The Two Pacifics."—Many a sufferer will be grateful for the late Surgeon-General Hammond's valuable paper on "The Self-Treatment of Wakefulness" in the April number of the *Twentieth Century Home*.—"There are few nudities so objectionable as the naked truth," says Agnes Repplier in a spirited essay in the May *Harper's* on "The Gayety of Life." Miss Repplier makes a charming appeal for cheerfulness, both in our books and periodicals and in our lives.—In the May *Delineator* there is an article by Mrs. Theodore W. Birney on children's companions which may be read with benefit by all parents.—The May *Century's* features of war interest will be "Unhappy Korea" and "Korea, the Bone of Contention," both from high authorities.—The opening chapters of the May *Atlantic* are made brilliant and entertaining by the first installment of Professor Norton's series of Letters of John Ruskin, illuminated by his own delightful and illustrative comments and explanations.